# A REVIEW OF BCLC'S VOLUNTARY SELF-EXCLUSION PROGRAM: CLIENT BEHAVIOURS, EXPERIENCES, AND PERCEPTIONS

*Dr. Amanda V. McCormick, Dr. Irwin M. Cohen, & Dr. Garth Davies*

*August 2022*

UNIVERSITY OF THE FRASER VALLEY

## Executive Summary

The objectives of this study were to assess the experiences and perceptions of VSE program participants and to measure the effects of the program on their gambling. In addition, BCLC was interested in learning about the various informal and formal supports used by VSE clients during their exclusion and the effects of the VSE program on client's quality of life. Another objective was to understand more about the factors that contribute to program violation attempts. In addition, there was interest in understanding at what point during the exclusion period do VSE clients experience reductions in problem gambling symptoms, if at all. Given these objectives, the current study offered VSE clients participation in several telephone interviews along with a weekly online survey. As with the prior studies conducted by these authors on BCLC's VSE program, participants were introduced to the study during their enrollment into the land-based VSE program.[1] Those who consented to participate in the study were contacted by members of the research team to schedule a telephone interview. Study participants were recruited between May 2019 and March 2020 at which point recruitment for the study concluded because of the COVID-19 pandemic and the closure of formal gaming venues across British Columbia. During the recruitment period, 3,911 people enrolled or re-enrolled into the VSE program. In total, 6.6% of these clients (n = 262) consented to have their name forwarded to the research team, and 3.3% (n = 128) participated in the first interview.

### MAIN T1 FINDINGS

The T1 interviews were conducted within two to three weeks of the participants' enrollment in the VSE program. A slight majority of study participants were female (51.6 per cent), most (66.4 per cent) were Caucasian, the most common marital status was married (35.9 percent), and the ages of participants ranged from 20 years old to 84 years old with a mean age of 48.2 years old. Most of the sample (60.9 per cent) came from the Lower Mainland followed by the Interior (19.5 per cent), Vancouver Island (14.1 per cent), and the North (5.5 per cent).

Participants began gambling at an average age of 29 years old. Over the past 12 months, the most common response was to gamble a few times per week (47.7 per cent). Primarily, participants gambled on slot machines (81 per cent) or Lotto/Scratch and Wins (72.8 per cent) and this gambling occurred in land-based venues. On average, participants gambled at three gaming venues in the past 12 months. On average, participants would bring around $800.00 to gamble and they would spend, on average, around 4.5 hours gambling per visit. When considering the largest amount of money that participants lost in one visit to a gaming facility in the past 12 months, the

---

[1] When people enrol in the land-based VSE program they are automatically excluded from all formal gaming venues operated across the province of British Columbia, as well as from BCLC's online PlayNow program. There is a separate PlayNow VSE exclusion that online gamblers can enrol in which only excludes gamblers from PlayNow.com, and not from land-based venues. The current study focuses only on those who enrolled in the land-based VSE program.

average was estimated at around $2,000.00. Using a Responsible Gambling Strategies Scale created by the authors of this report, participants thought about using an average of five responsible gaming strategies when gambling in land-based venues, but often did not adhere to these strategies. For example, while half of the participants thought about setting a time limit on how long they would gamble, 90% reported gambling over their time limit.

A little over one-third (39.1 per cent) of participants had ever gambled online, and, of these, nearly three-quarters (72.0 per cent) had done so within the past 12 months, most commonly on BCLCs PlayNow.ca website (55.6 per cent). The main reason given for gambling online was convenience (85.1 per cent). Age of onset into gambling online was, on average, 34 years old. On average, the amount of money gambled online was around $350.00, the amount of time spent gambling online was, on average, nearly three hours, and the largest amount of money lost from gambling online in one session was estimated at around $500.00. Using the Internet Gambling Disorder Scale-Short Form to screen for internet gambling disorders in the past 12-months, 16.7% of those who had gambled online in the past 12 months met the criteria for an internet gambling disorder.

Participants were screened for problem gambling at T1 using the Problem Gambling Severity Index (PGSI). The mean score was 13.9 suggesting that the majority (84.8%) scored in the category of problem gambling with negative consequences and possible loss of control. Using the Gambling Motives Questionnaire (GMQ), participants appeared to gamble for enhancement reasons meaning that they primarily gambled to enhance their mood. The Gambling Attitudes and Beliefs Scale (GABS) showed that the sample scored highest on the scales measuring Attitudes (acting calm, confident, and being a gracious winner) and Emotions (gambling to forget problems or as a 'pick me up', feeling alive or excited when gambling, feeling angry when losing at gambling). Two-thirds of participants were ranked as 'low' when it came to the Positive Play Scale – Behaviour (PPS) Honesty and Control, and Pre-Commitment subscales, while four-fifths were in the 'low' level of the PPS-Beliefs Gambling Literacy subscale. Conversely, just over half scored in the 'high' level of the PPS-Beliefs Personal Responsibility Scale.

Using a Gambling Preoccupation Scale (GPS) created by the authors of this report, participants were preoccupied with thoughts about gambling 'some of the time' in past seven days, as indicated by an average score of 4.3 on this scale. Participants scored an average of 32.7 on the Gambling Consequences Scale (GCS) with the most common consequence being 'experiencing unwanted financial losses because of gambling' (70.3 per cent). Using the Multidimensional Scale of Perceived Social Support (MSPSS), participants indicated that their highest levels of social support came from significant others ($X$ = 21.6) when compared to family or friends. On the Depression, Anxiety, and Stress Scale (DASS-21), participants scored in the 'moderate' range for depression ($X$ = 14.1), 'normal' to 'mild' level of anxiety ($X$ = 7.6), and the 'mild' range for stress ($X$ = 15.4). PGSI scores were significantly and positively correlated with scores on the GMQ scales, GABS, GPS, GCS, DASS-21 Depression, Anxiety, and Stress scales. PGSI scores were unrelated to the MSPSS Family, Friends, and Significant Other subscales. Subscale and total scores were also computed for the PPS and showed divergent relationships with the PGSI, with the PPS Behaviours subscales demonstrating negative associations with the PGSI while the PPS Beliefs Gambling Literacy subscale showed a positive association.

In terms of their current enrollment, most commonly, participants recalled enrolling during the daytime (65.9 per cent) through either a gaming facility, problem gambling counsellor, or BCLC Headquarters (65.6 per cent). The most common length of enrollment was three years (42.5 per cent) while the next most common enrollment length was six months (27.6 per cent). Many participants expressed a desire for a lifetime enrollment option. Two-thirds (65.6 per cent) of participants had previously enrolled in the VSE; the average number of previous enrollments was 2.4. The most common way to hear about the VSE program was through casino literature or marketing (57.9 per cent). The most common reasons given for enrolling were because they felt they had a gambling problem (94.5 per cent) and to save money (92.8 per cent). Participants were asked about their goals in the VSE program and reported that they wanted to cut back on the gambling activities they thought they had an issue with (48.0 per cent), though 41.5% reported wanting to quit gambling altogether.

Participants were very positive about their enrollment experience. Although the data indicated that they experienced many negative emotions at the start of their enrollment process, they 'agreed' or 'strongly agreed' that the security staff and GameSense Advisors (GSAs), if present, made them feel comfortable during this process and were sensitive to their needs. As in the previous study conducted by the authors of this report, counselling options were more likely to be recommended to the participant when a GSA was present at enrollment; but GSAs were only present at slightly over half (53.5 per cent) of the current enrollments. Despite the feelings of support from security and GSAs, participants still felt poorly about some aspects of the enrollment process, such as when having their photograph taken or when being escorted out through the casino floor by a staff member. The comfort of the rooms where the enrollments were conducted was less positively ranked by participants; the office spaces reportedly felt cramped, uninviting, loud, and, on occasion, were the office spaces of gaming facility employees. Notably, by the end of the enrollment process, participants felt significantly better emotionally, with reductions in their negative affect (e.g., feeling less distressed, ashamed, or upset) and increases in their positive affect (e.g., feeling more happy, strong, excited, proud).

Only one-third (34.6 per cent) of participants agreed to have their name released to a counsellor during their enrollment. Notably, of those who consented to have their names forwarded, only a minority (42.6 per cent) recalled being contacted about counselling. Of those who consented to having their name forwarded to a counsellor, most did so because they felt they had a gambling problem (91 per cent). Those who did not consent to having their name forwarded to a counsellor primarily felt that they wanted to manage their gambling issues on their own (54.4 per cent). However, there were several incorrect assumptions about counselling, including that the counsellor would not speak the primary language of the participant or that the participant could not afford counselling suggesting that more clarity needs to be provided to participants about the nature of problem gambling counselling for VSE clients. Of concern, those who felt that problem gambling counselling would not help them exhibited significantly higher PGSI scores ($X$ = 15.6) than those who disagreed with this statement ($X$ = 11.6).

## MAIN PSYCHOMETRIC DATA FINDINGS

An in-depth interview was conducted to examine gambling cognitions, beliefs, and attitudes, as well as to capture data on other constructs of possible relevance to problem gambling, such as mental health. In total, 76 participants completed the psychometric interview that was conducted shortly after the T1. Using a variety of standardized scales, the psychometric data revealed that, at the start of their exclusion period, most participants were experiencing either 'mild', 'moderate', or 'severe' levels of depression and one-fifth had thought about harming themselves in the past 12 months because of their gambling. Whereas male participants scored below the cut-point for hazardous drinking, female participants exceeded it. Participants felt low to 'mild' levels of anxiety and stress, and reported 'average' levels of self-control. However, they also reported higher levels of impulsivity than in past research, and high levels of emotional dysregulation. Participants appeared to struggle with accepting and managing negative emotions, engaging in goal-directed activities while experiencing negative emotions, and managing their impulses while experiencing negative emotions. The Inventory of Gambling Situations indicated that, in this sample, a primary situation in which participants found themselves gambling excessively in the past 12 months was when they felt a 'need for excitement'. The Gamblers' Beliefs Questionnaire indicated the current sample held 'moderate' levels of cognitive distortions about gambling and had 'somewhat' of a financially focused self-concept.

T1 PGSI scores were positively and statistically significantly correlated with the Burns Depression Checklist, Generalized Anxiety Disorder – 7 item Scale, Stress Proneness Scale, the Nonacceptance, Strategies, Goals, and Impulse subscales on the Difficulty in Emotional Regulation Scale, the Barratt Impulsiveness Scale-11, all Inventory of Gambling Situations subscales, the GBQ total and factor scores for both Luck/Perseverance and Illusion of Control, the Financially Focused Scale, and Financial Stress from Gambling scale created by the authors of this report. In addition, those who had experienced suicidal ideation in the past 12 months had significantly higher PGSI scores than those who had not. T1 PGSI scores were negatively and statistically significantly correlated with the Big 5 personality structure of emotional stability, with the Brief Self Control Scale, and with a Satisfaction with Life score. T1 PGSI scores were not significantly correlated with the AUDIT-C scores for men or women, the Drug Abuse Screening Test – 2 scores, the Awareness or Clarity subscales of the Difficulty in Emotional Regulation Scale, the Big 5 personality structures, except for Emotional Stability and the Financially Focused Scale – Short Form. Using separate multiple regression analysis to predict PGSI scores, suicidal ideation in the past year positively predicted PGSI scores at T1, Emotional Stability negatively predicted PGSI scores at T1, and the IGS-Negative Emotions scale was positively predictive of PGSI scores at T1.

## MAIN T2 FINDINGS

T2 interviews occurred around six months after the T1 interviews. In total, 75% of the T1 sample completed a T2 interview (n = 96). One-third of the T2 interviews were conducted pre-COVID-19 and 63.5% were conducted during the COVID-19 gaming facility closures. There were no significant differences in the demographics of the T1 compared to the T2 sample. In total, 35 participants at T2 had recently ended their VSE exclusion as they had enrolled for six months. Of these, 16% had re-enrolled by the T2 interview. Those who did not re-enroll indicated that they felt more control over

their gambling now (47.6 per cent); however, an equal percentage reported that they had started gambling again in a gaming facility. Of note, when asked to give other reasons why they had not re-enrolled, eight participants stated that it was due to the COVID-19 gaming facility closures.

Over the past six months, those who had gambled previously on PlayNow.com indicated that their gambling on the site had 'decreased a lot'. For about one-fifth to one-quarter of participants, their use of cigarettes, marijuana, illicit drugs, and other internet gambling had 'increased' over the past six months. However, most participants reported that their gambling activities had 'decreased a lot' or 'stopped entirely' by T2. The exceptions were with Lotto or Scratch and Wins, which 'increased' for one-fifth (18.7 per cent) and 'stayed the same' for slightly over one-third (36.3 per cent), and betting on sports outcomes, which 'increased' for slightly more than one-quarter of participants (27.8 per cent).

Few participants (14.6 per cent) regretted enrolling in the VSE. Those who did primarily wanted to return to gambling (78.6 per cent). In total, 11 participants (11.5 per cent) had tried to re-enter a gaming facility while excluded over the past six months. Most of these participants (63.6 per cent) attempted to violate once or twice. One-third (36.4 per cent) left their identification at home when they attempted to violate and one-quarter (27.3 per cent) went to a different location to gamble while the same percentage either had someone else drive them or took public transportation, presumably to avoid their license plate being scanned by security at the gaming facility. Overall, half (54.5 per cent) of those who attempted to violate their VSE agreement were able to enter a gaming facility successfully at least once while excluded. There were no penalties for those who were caught. While one participant was denied a jackpot, the common responses were to remind clients about their exclusion and escort them off the premises. Common reasons for attempting to violate in this small sample were being bored or feeling the urge to gamble and thinking they would not get caught. More commonly, reasons given for not attempting to violate among the 85 participant who did not try to violate were related to wanting to stay abstinent from gambling. To avoid attempting to violate when they felt the urge, participants spoke about trying to distract themselves by thinking about what else they could do with their money beyond gambling.

Six months after the original interview, participants were re-administered the PGSI. At the T2 interview, one-fifth (19.8 per cent) of participants remained in the problem gambling with negative consequences and possible loss of control category, while one-quarter (24.2 per cent) were now in the non-problem gambling range. Overall, the average PGSI score dropped to 4.3, indicating 'low levels of problems with few or no identified consequences'. PGSI scores were significantly higher for those who had attempted to violate their agreement. Likewise, GPS scores had dropped to 2.6 by the T2 interview, depression, anxiety, and stress scores as measured by the DASS-21 had all dropped to the 'normal' range, and Quality of Life ratings had improved slightly, from 3.2 to 3.9 on average. Still, by T2, only 18.8% of the sample reported that they had accessed problem gambling counselling or treatment. Most participants (56.8 per cent) reported that they were using the VSE program instead of problem gambling counselling or treatment. Similarly, there were very low rates of resource use in other areas, with only 5.2% of the sample reporting the use of other supports, like Gambler's Anonymous, mental health treatment, relationship counselling, or financial counselling.

The main benefits of being in the VSE program over the past six months were identified by participants as being able to save money (93.7 per cent), paying down debt (77.1 per cent), or paying down other bills (72.9 percent) as well as improvements to mental health (76 per cent) and spending more time with family and friends (80.3 per cent). Two-thirds (66.7 per cent) felt it was very easy to not gamble now. Because participants were not gambling, they reported spending more time with family, friends, or pets, were focusing on improving their physical or mental health, were being more present personally or at work, and were engaging in a wide range of other hobbies and activities. They spoke of benefits to their physical and psychological health, feeling happier overall and less consumed with thoughts about gambling. However, they also identified missing the social aspect of gambling or missing the excitement of gambling. Some missed out on the extra money they would have when winning at gambling, and others missed having gambling as an outlet for their stress. Overall, participants were 'satisfied' or 'very satisfied' with all aspects of the program, except for its ability to catch VSE participants who attempted to violate. They believed that the program worked well and contributed to preventing them from gambling. Regarding additional resources, VSE participants explained that they would like to see strategies for money management while gambling (53.1 per cent), budgeting tools (59.4 per cent), support groups (65.6 per cent), and responsible gambling education (64.6 per cent), as well as community resources to assist with responsible gaming (70.8 per cent). In terms of suggestions to enhance the program, participants suggested mandating identification checks at gaming venue entrances to keep excluded gamblers out, using facial recognition more extensively, tracking wins and losses on the BCLC program card, and increasing the amount of advertising about the VSE program. There were suggestions to offer shorter and longer periods of enrollments, and while some participants suggested extending the VSE exclusion to encompass all parts of the venue, including restaurants that were not on the casino floor, others wanted to see more flexibility around being able to attend the venue for non-gambling related purposes. There was agreement around needing better options for re-enrollment, as having to attend the gaming venue to re-enroll continued to be a trigger for many. Overall, 96.9% either 'agreed' (18.8 per cent) or 'strongly agreed' (78.1 per cent) that they would recommend the VSE program to others.

### MAIN CHANGES BETWEEN T1 AND T2 FINDINGS

In total, 94 participants had matched data between the T1 and T2 interviews, and so analyses were conducted to examine whether there were statistically significant changes to scores over this six-month period. PGSI scores dropped both substantively and significantly between T1 and T2, with an average decrease of 10 points. Similarly, GPS scores also dropped significantly between T1 and T2. Together, these scales indicated significant declines in engaging in problematic gambling behaviours, as well as in thinking about or being preoccupied with thoughts about gambling. DASS-21 scores dropped significantly for all three of the Depression, Anxiety, and Stress scales; the largest reduction was observed for Depression, which was also the area where participants scored the highest at T1. In other words, six months after enrolling in the VSE program, program participants, on average, were experiencing 'normal' ranges of depression, anxiety, and stress. In the 30 days prior to enrollment, participants ranked themselves as 'neither good nor poor' when it came to their overall quality of life. By T2, all measures of the Quality of Life instrument statistically

significantly improved. This was particularly notable given that two-thirds of the interviews were conducted during the onset of the COVID-19 pandemic. These findings support the notion that a short period of forced abstinence from formal gaming brings relief, in terms of reductions in disordered gaming, and improves mental health and satisfaction with self, life, relationships, and other quality of life indicators.

A total of 13 participants reported at either the T1 or T2 interview that they had attempted to violate their VSE agreement. Interestingly, when analyzing the 13 violators, those who attempted to violate and those who did not differ significantly on the amount of change experienced in their PGSI, GPS, or DASS-21 scores between T1 and T2. However, those who violated or attempted to violate their VSE agreement had a significantly lower Quality of Life score at T2 when it came to being satisfied with their personal relationships. None of the other Quality of Life scores differed, nor did the average difference score when comparing T1 and T2 scores and whether the participant violated the terms of their VSE agreement.

## UNDERSTANDING VIOLATION ATTEMPTS

In total, 63 participants completed a T1, T2, and Psychometric interview; nine of these participants had attempted to violate their agreement between T1 and T2. Analyses were conducted to compare the mean scores of those who violated against those who did not for the scales used in the Psychometric Interview. When examining the IGS scales, violators had significantly higher scores on gambling due to Negative Emotions, such as gambling when feeling depressed, as compared to those who did not attempt to violate their agreement. Similarly, those who violated their agreement also had significantly higher scores on the Social Pressure subscale suggesting that they were more likely to gamble when others around them expected them to or put pressure on them to gamble. On the DERS-18 measuring emotional regulation, the total score and Clarity, Goals, Impulse, and Non-Acceptance subscale scores all differed significantly when comparing violators to non-violators. In all cases, the violators exhibited significantly higher scores than the non-violators indicating that they experienced more difficulty in regulating their emotions in these domains. These findings, together with the IGS Negative Emotion finding, may suggest that those who attempt to violate their agreement have a more difficult time recognizing and controlling their emotions, particularly when experiencing mental health issues, such as depression or anxiety. Whereas they do not appear to experience significantly worse depression or anxiety than non-violators, they may be less prepared to manage their impulses to gamble when struggling with depression or anxiety. Thus, strategies to recognize and manage emotions may be an important area to address. In addition, violators had significantly higher total scores on the BIS-11 than non-violators suggesting that they had higher levels of impulsivity. The only Big 5 measure that violators and non-violators differed significantly on was Emotional Stability, where those who violated their VSE agreement had a significantly lower score. This data further supports the notion that VSE violators in the current study appeared to have issues identifying and regulating their emotions and tended to gamble to cope with negative emotions. Finally, those who violated their VSE agreement had significantly lower Life Satisfaction scores than those who had not violated. Based on the data presented above, when a VSE participant was dissatisfied with a personal relationship and experiencing negative emotions that they were

struggling to effectively identity and cope with, gambling appeared to be a possible outlet for those who ended up violating their VSE agreement.

While the sample of violators was very small and caution must be advised when interpreting these findings, there were consistent trends in the analyses suggesting that in a sample of disordered gamblers, emotional dysregulation appears to be a key factor related to attempts to violate one's VSE agreement. Violators were more likely than non-violators to be motivated to gamble because of negative emotions or social pressure, were less satisfied with their personal relationships, had difficulty recognizing and coping with their negative emotions, and were less satisfied overall with their lives compared to non-violators.

## MAIN DIARY DATA FINDINGS

The final component of the current study involved a weekly online survey completed by study participants that measured changes in their gambling behaviours and thoughts, mental health, personal relationships, and quality of life indicators. The PGSI was repeated at weeks 4, 8, and 12; these were compared to the T1 PGSI data. The diary data revealed that most of the observed reduction in PGSI scores occurred during the first four weeks of VSE program participation. Similarly, over the course of the 12 weeks of diary data collection, emotional wellbeing improved while negative emotions were reduced, both at statistically significant levels. During the first week of diary data collection, Positive Affect scores decreased while Negative Affect scores increased, which may be reflective of the emotional struggles participants felt while withdrawing from problem gambling behaviours. Overall, Positive Affect appeared to increase significantly during the final four weeks of the diary data collection (between Months 2 and 3), while Negative Affect dropped significantly during the middle four weeks (between Months 1 and 2). DASS-21 scores also decreased over the course of the diary study, mostly for Depression. Anxiety and Stress scores dropped in the first and last month of the diary study, with a slight increase in the middle. Conversely, depression increased during the first month, but then continued to decrease for the remaining months of the diary study. Participants also showed decreases in urges to gamble over the diary surveys. The total Gambling Urge Scale score dropped 30% with the largest decrease occurring between Months 2 and 3 of the diary study. While there were reductions in problems with sleep, smoking, and the nonprescribed use or overuse of medicines/drugs between Months 1 and 3, these declines were not statistically significant; however, very few of these were at problematic levels at the outset of the study. Conversely, substantial alcohol use showed a very small increase; again, this change was not statistically significant. The GPS changes revealed statistically significant reductions in thinking about the consequences of gambling during the first month and experiencing the urge to gamble in the second month. However, when it came to the ability to control the urge to gamble, this decreased significantly in the first month, before improving slightly in the second month.

All but one of the Quality of Life indicators improved gradually over the three month study period. However, only two of those increases, namely 'relationship with family' and 'finances' were statistically significant between Months 1 and 3. Of note, these were areas where participants also self-identified benefits to participating in the VSE program. Interestingly, while there was an overall

positive trend in terms of ratings of family support on the MSPSS scale over the three months of study, these changes were not statistically significant. Initially, ratings of significant other support dropped before increasing between Months 2 and 3; however, again, this change was not statistically significant. Ratings for social support from friends decreased over the three months of study, although this reduction was not statistically significant.

Past week use of counselling and intended use of counselling in nine different ways over the next seven days were asked at each diary survey. Participants only very sparingly connected with any form of counselling related to gambling. Only one of these items was statistically significant, namely having 'spoken to a Gamblers Anonymous (GA) sponsor' increased significantly over time. For all other measures, there was essentially no change over the course of the diary study. Similarly, there were no real changes to planned connections with counselling over the three-months. Participants were not, on average, planning to connect with counselors in their immediate futures. There were two significant findings, for 'meet with a problem gaming counselor' and 'connect with GamTalk or other online counselor', but these both were negative. In other words, participants expected to connect with these counselors less over time. This provides further evidence of the importance of connecting VSE participants to counselling at the outset of their enrollment experience. In terms of future counselling, the only significant change over time was to 'seek out info or resources on problem gambling online' which increased significantly over the first four weeks of the study.

## RECOMMENDATIONS

The VSE program was viewed by participants as an effective strategy to reduce or at least temporarily eliminate gambling behaviours. The program was rated very highly, and most participants 'agreed' or 'strongly agreed' that they would recommend the VSE program to others. Still, there are several ways that the program could be enhanced.

### *Gambling Education Program*

It is recommended that BCLC offer participants an educational program about healthy gambling behaviours that could be completed during the exclusion period. The education program could focus on developing participants' awareness of the risks of gambling, issues related to problem gambling, educating clients about how gambling works, correct some of the commonly believed myths about gambling, and how to develop a gambling safety plan. If BCLC were to develop a gambling education program for excluded clients, offering different models for completing this program would be advisable, with options to complete including in-person and online.

### *Enrollment Length Options*

It is not recommended that **BCLC offer shorter lengths of enrollment**. Many participants enter the VSE program with high levels of problem gambling behaviours, financial stress, feelings of depression, and negative emotions. Many of these symptoms and emotions fluctuate over the first three months of enrollment but show positive levels of change by the third month. Returning to gambling after just one to three months in the VSE program would likely trigger a resurgence of negative symptoms. However, it is recommended that **BCLC examine the options for extending the enrollment length beyond three years**. Many participants continued to express a desire for a

lifetime exclusion option, and, while there are good reasons for BCLC not yet introducing this option, BCLC might consider expanding the current options of enrollment to include a five year or even 10 year exclusion option. It is recommended that this option only be made available to those who have recently completed at least one year of previous enrollment and that it not be offered to those who are new to the program.

### Re-Enrollment Method Options

It is also recommended that **BCLC introduce new methods by which VSE clients can re-enroll in the program**. Those who are not near one of BCLC's headquarters in Vancouver or Kamloops and those who are not attending counselling and are able to re-enroll in their counsellor's office are required to complete their re-enrollment in a land-based gaming venue in British Columbia, which can be difficult and distressing for some. BCLC should explore its capacity to enable VSE program clients who have already completed at least one term of exclusion within a recent timeframe, such as within the past two years, to re-enroll in the program via an app that utilizes technology to validate their identity and update their current photo. Like ICBC's shift to online insurance provisions and use of digital technology to collect legal signatures, BCLC could conclude the VSE enrollment online by having a GSA phone the applicant, read through the contract verbally, and then confirm their re-enrollment through a digital signing of the agreement. It is also recommended that **BCLC examine their VSE agreements to determine whether a shortened version could be used for those who are re-enrolling** within a time frame during which the agreement has not been updated with new information, as this is one of the least well-received aspects of the re-enrollment process.

### GSAs at Enrollment

In addition, it is **recommended that GSAs continue to be present at all VSE enrollments**, if possible, as there continue to be differences in the rate of counselling recommendations between security staff and GSAs.

### Trauma-Informed Enrollment Practices

It is recommended that **BCLC review its enrollment practices to determine where it could become more trauma-informed**. The enrollment process is an extremely distressing time for participants during which they are asked to review and sign a legal agreement to self-exclude from a gaming venue. They are then escorted out of the gaming venue by a member of staff. Although they feel tremendous relief once enrolled in the VSE, many participants expressed feeling ashamed and embarrassed by the entire process of enrolling in the VSE program. Given this, it is recommended that **BCLC integrate trauma-informed practices into their future training programs** for those who enroll clients or play any role in administering the VSE program so that they can better understand the VSE experience from the perspective of program participants. Most importantly, **BCLC should review the rooms where enrollments are conducted from a trauma-informed lens** as it appears that many physical adjustments could be made to these locations to ensure that clients feel comfortable and supported while engaging in the VSE enrollment process. One major shift would be to recommend that the enrollments are conducted away from the casino floor in a space that is close to the entrances/exits of the casino, and in a space dedicated to VSE enrollments.

### *Review and Expand the Counselling Options*

When participants enroll in the VSE program, they are asked if they would consent to have their name released to a problem gambling counsellor. As noted above, in this current sample, few participants agreed to this request. When they did consent, it was surprising that approximately half of the participants did not recall being contacted by a problem gambling counsellor. Given this, **BCLC may want to review the counselling referral process currently in place** to ensure that there is a timely referral to counselling being made when a VSE client consents to being contacted by a counsellor. BCLC may want to review whether a **wider range of counselling opportunities can be provided to VSE clients**, such as debt counselling or marital or relationship counselling, as these issues appear to be concurrent with problem gambling. Furthermore, as many of the participants struggled with emotional regulation, **mindfulness programming may be a useful area to explore** as a treatment option, as research has supported its use in reducing feelings of trauma, distress, depression, and addiction.

### *Program Marketing*

The previous study estimated that approximately 125,000 British Columbian's met the criteria for moderate or high-risk problem gambling and that the VSE program enrolled approximately 5% of them. Over the time that the current study was recruiting participants, around 371 gamblers either enrolled for the first time or re-enrolled in the VSE program each month. It is recommended that **BCLC take some of the positive stories emerging from the interviews and use these to market the VSE program**. In particular, the study has provided further evidence that the effects of this program are immediate. While participants go into the enrollment process feeling distressed, ashamed, and overwhelmed, once the enrollment process has concluded, they reported an increase in feeling excited, strong, proud, relieved, and inspired. Within one month of enrolling, their symptoms of problem gambling dropped from high-risk levels to low or no-risk levels. Their negative emotions, such as depression, stress, and anxiety, decreased and they were experiencing fewer thoughts about gambling and urges to gamble while experiencing increases in their perceived quality of life. It is important to share these findings with those who could benefit from the program and encourage them to take a chance on it, even if it is just for six months.

### *VSE Mobile App*

Many of the diary participants spoke about the varied benefits of being held accountable each week through participating in the weekly diary check-ins, and the qualitative interview data also revealed a desire for support groups where self-excluded participants could connect and share with one another their experiences, successes, and challenges. Given this, **BCLC is strongly encouraged to consider developing a mobile app for VSE clients** that would allow them to track their progress in the exclusion program, identify and record their successes, such as by estimating the amount of money saved each week or month since their period of exclusion began, provide an anonymized platform for conversations with other VSE clients for social support, provide current links to problem gambling and other related counselling resources, provide healthy gambling strategies and tips to avoid urges to gamble, encourage mindfulness activities, and to allow clients to re-enroll in the VSE program when their period of exclusion has been completed.

There are several areas where continued or future research is recommended. Previous reviews of BCLC's VSE program identified a small group of 'chronic' violators who would attempt to re-enter the casino multiple times during their exclusion, despite the presence of disincentives, such as the jackpot rule. While the current study sought to address this, the shortened recruitment period, and the closure of gaming venues because of the COVID-19 pandemic meant that the sample of program violators was quite small. Given this, it is recommended that **future research attempt to specifically recruit a sample of program violators at the point of the attempted violation**. A second area for future research concerns counselling uptake. Given that counselling uptake continues to be very low among participants, **future research should examine the effects of a more proactive enrollment approach**. By proactively connecting VSE clients with a counsellor, it is possible that once clients have had some time to adjust to being excluded from gambling and to properly consider the benefits that counselling may offer, more VSE clients will be amenable to accessing counselling or treatment.

### *Future Research*

As part of this current study's methodology, there was an attempt to include a sample of online clients who enrolled in the VSE program through the PlayNow website. However, recruitment on the PlayNow website for this study was extremely low (n = 12). **Future research should attempt to tap into the sample of PlayNow.com VSE clients** to better understand their demographics, gambling behaviours, and experiences with the VSE program and how these may differ from those in the land-based VSE program.

# Table of Contents

## List of Tables

## List of Figures

## Project Objectives

The overarching objectives of the current study were to assess the experiences and perceptions of VSE program participants and to measure the effects of the program on their gambling participation. Moreover, BCLC was also interested in learning more about the various formal and informal supports that VSE participants use during their exclusion and the effects of the program on participants' quality of life. As such, validated scales and questions were added to explore these trends and their associations with success in and satisfaction with the VSE program.

The authors of this report's previous studies identified a sub-group of VSE participants who experience more challenges with abstinence from gambling during their period of exclusion, some of whom have been described as 'chronic violators'. Given this, another goal of this current study was to explore in greater detail those who struggled to comply with the conditions of their VSE agreement to better understand their supports or lack of supports, and to identify the factors that might contribute to heightened risk for violating their VSE agreement. Consequently, an additional interview described as the 'Psychometric Interview' was added to the current study to better understand how gambling beliefs and behaviours, mental health issues, and relationship challenges might affect how VSE participants experience their period of exclusion and how these factors might influence violations.

In the most recent studies of the VSE program in British Columbia, the authors of this current report concluded that participants experienced substantial reductions in symptoms of problem gambling between their first interview (T1) and their second interview, approximately six months later (T2) (Cohen et al., 2017; McCormick et al., 2018). To further understand the timeline of these changes, and to explore other early attempts to succeed in the VSE program, the current study introduced a weekly diary for participants to complete designed to measure program experiences over the first 12 weeks after their enrollment in the program. Overall, the project objectives were to explore perceptions and experiences in BCLC's VSE program and to understand the various factors that might affect these experiences.

## Project Methodology

A similar method was used to collect data in the current study as in the previous two iterations of the VSE studies (Cohen et al., 2011; Cohen et al., 2017). Recruitment primarily occurred onsite at gaming facilities across British Columbia when a client was completing their self-exclusion enrollment. While completing the enrollment, participants were provided with an information sheet that summarized the purpose of the current study. A second page contained the consent form that participants were invited to complete and leave with the BCLC security staff member or GameSense Advisor who was completing their enrollment. The forms were then mailed directly to the researchers at the University of the Fraser Valley. Given that those enrolling in the program may not feel equipped to make the decision to participate in the study at the time of their enrollment in the VSE program, as that time can be a highly emotional experience, these forms were also included

in the packages sent home with VSE enrollees so that if they were interested in participating in the study, they could mail in their own consent form post-enrollment.

Recruitment began in May 2019 and was concluded earlier than anticipated in March 2020 due to the COVID-19 pandemic and subsequent closure of physical gaming sites across the province. Over this time period, 262 consent forms were received by the researchers. Of the consent forms received by the researchers, 131 of these (50 per cent) did not complete a T1 interview. Among these 131 people, the most common reason for not completing an interview was that the research team was unable to reach the person to schedule an interview (56.5 per cent). On their consent form, participants were asked to provide a phone number and/or email that they could be contacted at. The research team attempted to contact participants up to three different times, after which they were withdrawn from the study. One-fifth (21.4 per cent) of those who completed a consent form but did not participate in the study withdrew because of a failed interview. In this case, an interview was booked and confirmed with the participant, but when they were called to complete the interview at the scheduled time, they did not answer the call. Another 16.8% of participants connected with the research team but once the nature and purpose of the study was explained again and they were asked to re-affirm their interest in participating, they withdrew their consent to participate at that time. The remaining eight withdrawals were for various reasons, including that their consent form was not received in time (n = 6), due to COVID-19 (n = 1), or due to a language barrier (n = 1). Three additional interviews were conducted but were not used in the final analyses due to only being partially completed or due to concerns about veracity. According to BCLC data, in total, between May 2019 and March 2020, BCLC enrolled 3,911 people into the VSE program. Of these, 2,478 (63.4 per cent) people were renewing their enrollment in the VSE program while the remaining 1,433 were first-time enrollers. Given the gaming facility closures due to the COVID-19 pandemic, March 2020 was an exception to the typical number enrolled by BCLC into the VSE program each month. When not considering this anomaly, between May 2019 and February 2020, an average of nearly 371 people enrolled or reenrolled in the VSE program each month. Returning to the entire enrollment sample of 3,911, these numbers suggest that the current study had an initial response rate of 6.6%. When considering only those who were successfully contacted to complete a T1 interview, the response rate dropped to just 3.3%.

For most participants, the T1 interview was conducted over the phone. Interviews were scheduled in advance, and a member of the research team called the participant at the agreed upon day and time. The interviewer reviewed the information sheet and consent form and re-affirmed the person's consent to participate with the study before beginning the interview. The interviewer entered the participant's responses into an online survey platform hosted on a Canadian-based data server by the company Jitsutech. A small minority of participants (10 per cent) requested to self-administer the T1 interview, and this request was accommodated. In these cases, the participant was sent the survey link with their code number and asked to complete the survey online.

At the conclusion of the T1 interview, participants were informed they would be contacted again by phone/email in approximately six months for their second interview. In the meantime, they were invited to participate in the Psychometric study that would be scheduled to occur within the following one to two weeks. During the T2 interview, those who indicated that they attempted to or successfully breached (violated) their exclusion agreement by attempting to enter a physical

gaming facility in British Columbia during their exclusion period were invited to participate in the Violators interview, which was a semi-structured qualitative interview exploring their motivations for and their experiences with violating the VSE agreement. Few participants (n = 11) indicated that they had attempted to violate; however, this very small sample size may also be due to the COVID-19 closures of physical gaming facilities. Given that only six participants consented to and completed the violator interview, this data was not analyzed or included in this report.

Participants were mailed VISA gift cards following their participation in each interview. In consultation with BCLC, T1, and Violator participants received a $50 gift card each time they completed study components, while Psychometric and T2 participants received a $25 gift card for completing each of these components. Those participating in the Diary study were pro-rated, receiving between $25 to $100 for completion of the weekly diaries. All gift cards were mailed in plain white envelopes.

Nearly all (94.5 per cent) T1 interviews were conducted before the emergence of the COVID-19 pandemic, while seven interviews (5.5 per cent) were completed within three weeks of the closures of gaming facilities that began in British Columbia on March 16, 2020 (hereinafter COVID- 19 shutdown). T2 interviews were divided with one-third being conducted prior to the COVID-19 shutdown and the remaining 63.5% occurring during the closures. The COVID-19 shutdowns meant that the usual questions regarding return to gambling post-exclusion and VSE violations during exclusion were irrelevant. Given this, the emphasis of the current report is on exploring the T1 and T2 trends, the change in gambling and associated cognitions and behaviours between T1 and T2, the weekly and monthly changes experienced during the first three months of enrollment in the diary study, and the psychometric data that more deeply explored gambling cognitions and behaviours and associated issues.

## Data Analysis T1 Interviews

### GENERAL DEMOGRAPHICS

In total, 128 VSE clients participated in a T1 interview. Of those, a slight majority (51.6 per cent) identified as female, and the remainder (48.4 per cent) identified as male. The mean age of clients was 48.2 years old with a range of 20 years old to 84 years old. There was a statistically significant difference in the mean age by gender as the average age for male clients was 42.5 years old compared to female clients with a mean age of 53.6 years old.[2] Slightly more than one-third of the sample (35.9 per cent) reported being married and another 11.7% indicated that they were in a common law relationship. Just more than one-fifth (21.9 per cent) were single and 11.7% were divorced (see Figure 1).

---

[2] $t$ (120.25) = -3.97, p < .001

**FIGURE 1: MARITAL STATUS OF PARTICIPANTS (N = 128)**

| | | | | | | |
|---|---|---|---|---|---|---|
| 21.9% | 35.9% | 6.3% | 11.7% | 4.7% | 11.7% | 7.8% |
| Single | Married | Separated | Divorced | Widowed | Common Law | Dating |
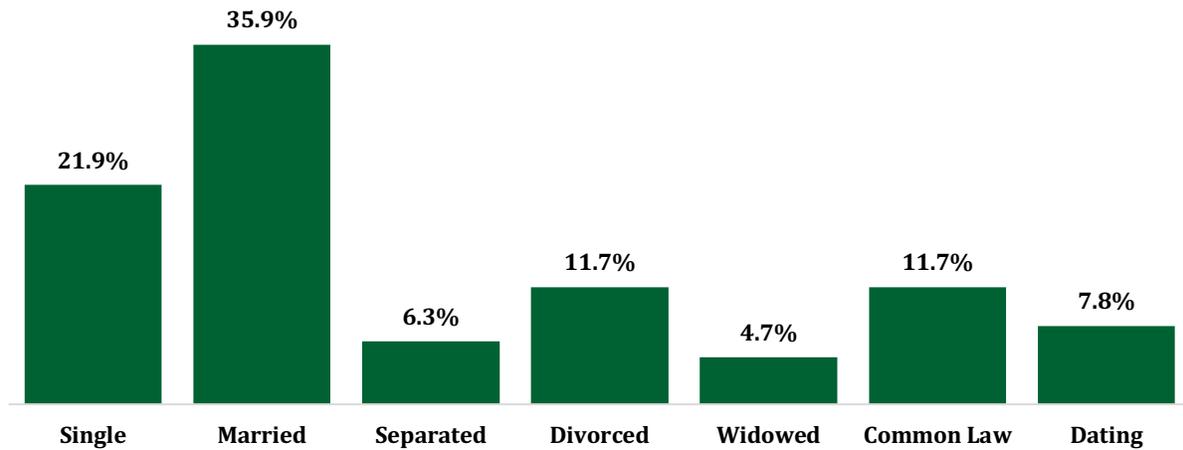
In terms of level of education, two-thirds of the sample had either a high school of GED diploma (23.6 per cent), some college education (20.5 per cent), or had completed a two-year university diploma (2.0 per cent). As demonstrated in Figure 2, only a very small number of participants had not graduated high school (7.9 per cent), and a small proportion had completed a Master's degree (3.1 per cent), or had professional training or a professional degree (3.1 per cent).

**FIGURE 2: EDUCATION LEVEL OF PARTICIPANTS (N = 128)**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 7.9% | 23.6% | 20.5% | 22.0% | 19.7% | 3.1% | 0.0% | 3.1% |
| Less than High School | High School or GED | Some College | Two-Year Diploma | Four-Year Degree | MA | PhD | Professional… |
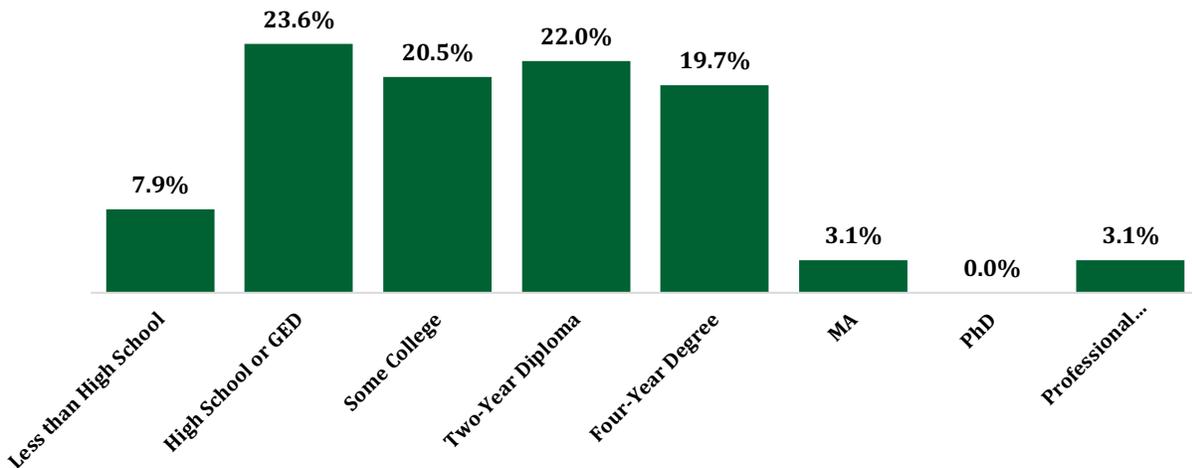
In terms of employment, nearly three-quarters of the sample (71.9 per cent) were employed full-time or part-time. A substantially smaller proportion (14.8 per cent) were retired, while very few participants were unemployed but were in the process of seeking work (5.5 per cent). The remaining participants (7.8 per cent) indicated some other form of employment, such as being a homemaker, or experiencing a disability that prevented them from seeking employment. On the

issue of participants' personal total income before taxes, 40.6% reported an income of between $50,000.00 and $99,000.00 and an additional 35.9% reported a personal income of between $20,000.00 and $49,999.00. As demonstrated in Figure 3, only four participants (3.1 per cent) reported no personal income and 10.9% reported a personal income of greater than $100,000.00.

**FIGURE 3: PERSONAL ANNUAL INCOME OF PARTICIPANTS BEFORE TAXES (N = 128)**
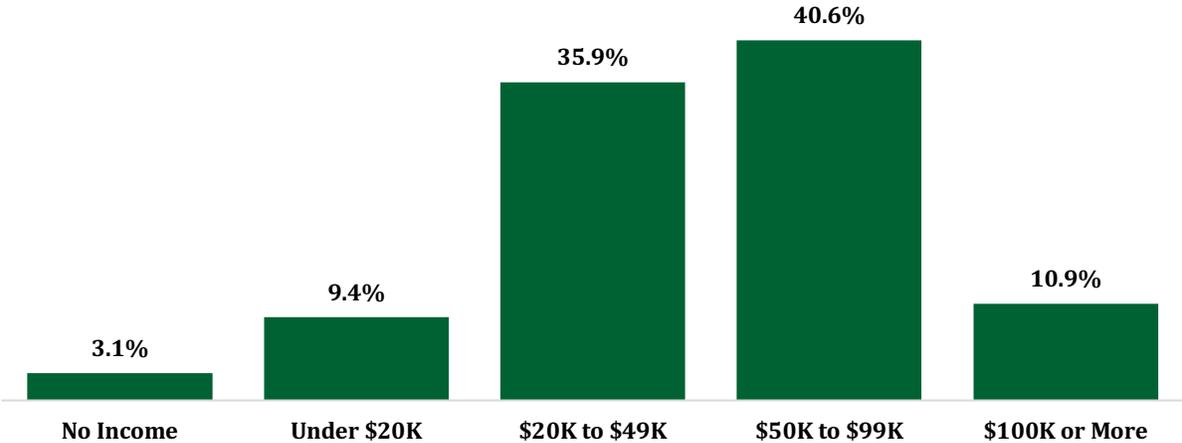


Most participants (60.9 per cent) indicated that their primary residence was in the Lower Mainland of British Columbia. This was followed by the Interior (19.5 per cent), Vancouver Island (14.1 per cent), and the North (5.5 per cent). When asked to identify their primary language or the language that the participant spoke most often at home, the overwhelming majority (86.7 per cent) indicated that their primary language was English. Of the other language options, only five participants reported that their primary language was Punjabi (3.9 per cent), three participants reported Chinese as their primary language (2.3 per cent), and two participants identified Farsi as their primary language (1.6 per cent). Given the data on primary language, it was not unexpected that two-thirds of the sample self-identified as Caucasian and 11.7% self-identified as Asian. While Indigenous people comprise approximately 6% of the general population of British Columbia, 8.6% of the sample self-identified as Indigenous (see Figure 4).

**FIGURE 4: SELF-IDENTIFIED ETHNICITY OF PARTICIPANTS (N = 128)**
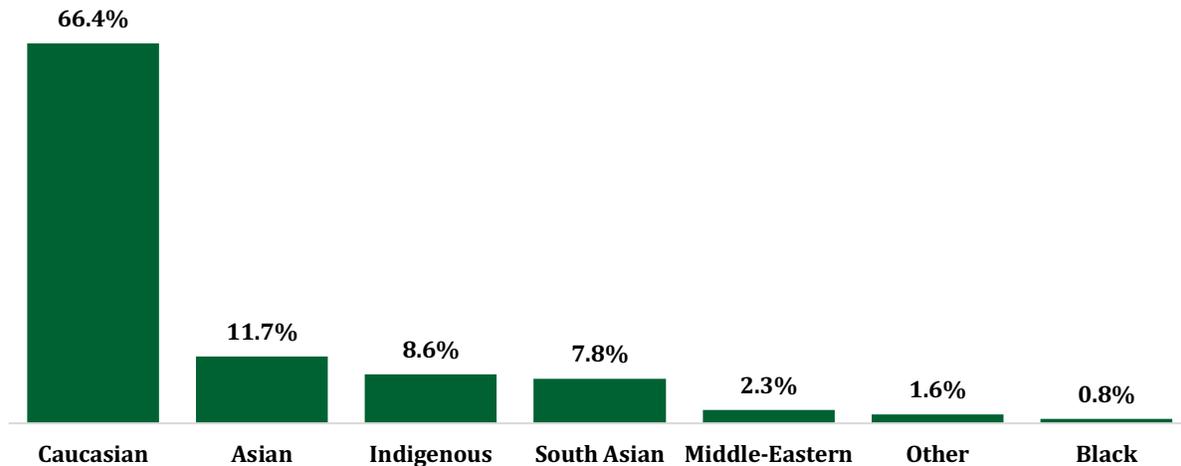


## PREVIOUS GAMBLING EXPERIENCES

Participants were asked at what age they began gambling. The mean age was 29 years old; however, the age range was from eight years old to 59 years old. Of note, one-third of the sample identified that they were first introduced to gambling when they were 19 years old or younger and only 19% of the sample was first introduced to gambling when they were 40 years old or older. In effect, half of the sample was between the ages of 20 and 39 years old when they were first introduced to gambling. The most common way that participants were first introduced to gambling was through a friend or friends (67.4 per cent) followed by a parent (31.6 per cent), and another family member, such as a sibling (11.7 per cent). Only a very small proportion of participants were first introduced to gambling by radio or TV advertisements (7.4 per cent) or by internet advertisements (3.2 per cent). Of note, 9.3% of participants indicated that they were first introduced to gambling at a casino or bingo hall. Participants who were first introduced to gambling by parents were statistically significantly younger ($X$ = 22.6 years old, SD = 10.4) than those not introduced to gambling by parents ($X$ = 30.9, SD = 12.3) when they first began gambling.[3] There were no statistically significant differences in age of onset into gambling when comparing the other three pathways.

Participants were asked to report how often they had gambled over the previous 12 months, including playing lotto and keno. Only two participants indicated that they had not gambled at all over the past 12 months. While 8.6% of participants reported gambling daily, the most common response was a few times per week (47.7 per cent). And, while nearly one-fifth of participants (18.8 per cent) indicated that they had gambled a few times per month over the past year, a smaller proportion (15.6 per cent) reported gambling only once per week (see Figure 5). Only a small number of participants reported gambling once per month or even less frequently (3.9 per cent for each response category).

---

[3] $t$ (126) = 3.36, p = .001

**FIGURE 5: GAMBLING FREQUENCY OVER THE PAST 12 MONTHS (N = 128)**
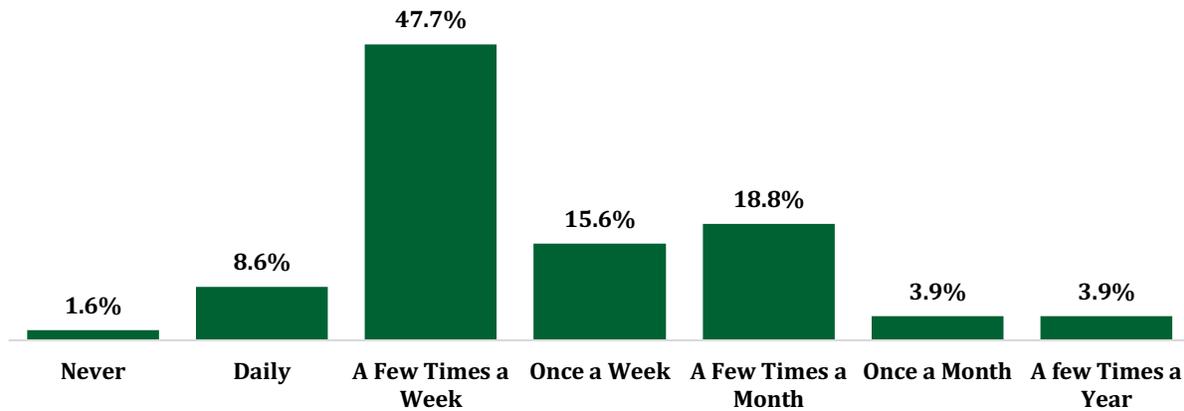


Table 1 demonstrates the various forms of gambling that participants regularly engaged in over the past year and whether they gambled online, at a land-based facility, or both. The most common form of gambling reported by participants was playing slot machines (81 per cent) followed by Lotto or Scratch & Wins (72.8 per cent). Of note, a substantial minority of participants (47.2 per cent) reported playing table games, such as Blackjack, Poker, Roulette, and Craps. Except for betting on the outcomes of sporting events, most of the gambling occurred exclusively at land-based facilities. Moreover, only a small proportion of participants played the same game both online and at a land-based facility. For example, with respect to playing slot machines, for those who reported playing slot machines in the past 12 months (n = 102), 78.4% exclusively played slot machines at a land-based facility, 2.0% did so exclusively online, and 19.6% played slots at a land-based facility and online in the past 12 months. The data presented in Table 1 suggests that online gaming exclusively or in combination with a land-based facility accounted for only a small proportion of participant's gambling behaviour.

**TABLE 1: TYPE OF GAMBLING AND LOCATION OF GAMBLING IN PAST 12 MONTHS (N = 126)**

| | Played in Past Year | Land-Based Only | Online Only | Online & Land-Based |
|---|---|---|---|---|
| Slot Machines | 81.0% | 78.4% | 2.0% | 19.6% |
| Lotto or Scratch & Wins (via a lotto retailer) | 72.8% | 97.8% | 1.1% | 1.1% |
| Table Games | 47.2% | 77.0% | 3.3% | 14.7% |
| Keno (via a lotto retailer) | 27.9% | 100% | 0 | 0 |
| Video Poker | 9.8% | 50.0% | 33.3% | 16.7% |
| Betting on Sports Outcomes | 9.8% | 33.3% | 50.0% | 16.7% |
| Bingo | 9.0% | 90.9% | 0 | 9.1% |
| Betting on Horse Races | 6.6% | 87.5% | 12.5% | 0 |

Of note, when asked to exclude online gambling and to report how many different gaming venues participants visited in British Columbia in the past 12 months, the average was three venues with a range of 0 to 20. However, there was only one participant who reported visiting 20 different venues

and one participant who reported visiting eight different venues. Given this, it might be more useful to know that 79.4% of the sample reported visiting one to four different venues in the past 12 months and the median number was three gaming venues.

In addition to the number of different venues participants visited in the past 12 months, VSE clients were asked how much money, on average, they would gamble in a single visit to a land-based casino. Participants were told that this meant the amount of money they brought with them to gamble and did not include any promotions or winnings. While one participant reported bringing no money and another reported bringing just one dollar, once these two participants were removed from this analysis, the average amount of money was $875.40 (SD = $1515.69) with a range of $75.00 to $12,500.00, while the median amount was $500.00. Of note, 50.4% of the sample reported bringing $75.00 to $450.00 while 16% of the sample reported bringing $1,000.00 or more, on average, to gamble in a single visit to a land-based casino. This data was additionally skewed by one participant who reported bringing, on average, $12,500.00; without this extreme case, the average amount of money that participants brought with them to gamble was $780.11 (SD = $1,091.04), ranging from $75.00 to $7,000.00.

Participants were then asked how much time, on average, they spent gambling during a single visit to a land-based casino in the past 12 months. The average was 4.4 hours (SD = 4.2 hours) with a range of three-quarters of one hour to 30 hours and a median of 3.5 hours. Of note, 52% of the sample reported gambling in a single visit to a land-based casino, on average, 3½ hours or less, while only 5.7% reported gambling, on average, eight or more hours during a typical single visit to a land-based casino over the past 12 months.

Participants were asked what was the most amount of money they had lost in a single visit to a land-based casino in the past 12 months. Here, seven participants either did not answer the question or reported that their largest loss was $10 or less. Once these participants were removed from the analysis, the average was $2,070.50 with a range of $100.00 to $22,000.00. Of note, 47.1% of the sample reported their largest lost as being between $100.00 and $870.00, while 6.6% of the sample (n = 11) reported their largest lost as between $5,000.00 to $22,000.00.[4]

### *Online Gambling Experiences*

Of the entire sample, 39.1% (n = 50) reported that they had ever gambled online. The average age at which these participants first began gambling online for fun was 34.1 years old (SD = 15.2 years old) with an age range of 16 to 73 years old. Similarly, when asked their age when they first started gambling online for money, the average age was 34.8 years old with an age range of 17 to 73 years old (SD = 15.0 years old). These results could be interpreted to suggest that participants first tried

---

[4] Of note, without removing the two participants who reported losing, on average, $10.00 or less, the range of average amount of money lost was between $0 to $22,000, with a mean of $1,988.48 (SD = $3,486.42). Using a trimmed mean that removes the smallest and largest 2.5% of data resulted in a mean amount of $1,360.54 with the 95% confidence interval ranging from $1,373.77 to $2,603.18. Here, the median was $1,000.00.

online gaming for free but progressed to playing online for money within one year. The most common ways that participants were first introduced to online gambling was through a friend or friends (36 per cent) or an internet advertisement (36 per cent). Very few participants were first introduced to online gambling by a radio or television advertisement (16 per cent) or a family member (4 per cent). There were no statistically significant differences in age of onset into online gambling for fun or money or the ways that participants were introduced to online gambling.

Of those who reported ever gambling online, 72% (n = 36) indicated that they had done so at least once in the past 12 months. As demonstrated in Table 2, a slight majority of participants (55.6 per cent) reported playing on BCLC's PlayNow.com website and one-quarter of those who gambled online in the past 12 months did so on PokerStars.

**TABLE 2: INTERNET SITES THAT PARTICIPANTS PLAYED AT IN THE PAST 12 MONTHS (N = 36)**

| | |
|---|---|
| BCLC's PlayNow.com | 55.6% |
| PokerStars | 25.0% |
| Bet365 | 19.4% |
| Bodog | 13.9% |
| Full Tilt Poker | 11.1% |
| Party Casino | 8.3% |
| PartyPoker / Bwin | 8.3% |
| Draft Kings | 2.8% |
| William Hill | 0 |

These participants were asked how much money, on average, they would gamble in a single online session. Participants were told that this meant the amount of money they put at risk and did not include any promotions or winnings. The average amount of money put at risk was $346.57 (SD = $443.07) with a range of $25.00 to $2,000.00 and a median of $200.00. Of note, 54.2% reported putting between $100.00 to $300.00 at risk while 14.4% reported putting $1000.00 or more, on average, at risk during an average single session of online gambling in the past 12 months.[5]

Participants were then asked how much time, on average, they spent during a single online gambling session in the past 12 months. The average was 2.8 hours (SD = 2.10 hours) with a range of 30 minutes to eight hours and a median of two hours. Of note, 55.6% of the sample reported gambling in a single session online, on average, two hours or less, while 11.1% reported gambling, on average, five or more hours during a typical single online session over the past 12 months. Participants were asked what was the most amount of money they had lost in a single session of online gambling in the past 12 months. The average largest amount of money lost was $555.71 (SD = $677.30) with a range of $50.00 to $3,000.00 and a median of $250.00. Trimming the data resulted in the mean largest amount of money lost being reduced to $471.59 with a range of

[5] As above, trimming the data to remove the lowest 2.5% and the highest 2.5% resulted in a mean amount of money put at risk of $284.48 with a range of $194.37 to $498.77.

$323.05 to $788.38. Of note, 48.6% of the sample reported their largest loss as being between $50.00 and $200.00, while 20% of this sample (n = 8) reported their largest loss as between $1,000.00 to $3,000.00.

Participants were assessed for an internet gambling disorder over the past 12 months using the Internet Gambling Disorder Scale – Short Form (IGDS-SF9) (Pontes & Griffiths, 2015). This screening tool is based on nine items designed to assess the severity of an internet gambling disorder and its detrimental effects, such as feeling preoccupied with internet gambling, failing to control or cease internet gambling, and gambling online to temporarily escape or relieve a negative mood. The instrument was found to be reliable, valid, and highly suitable for measuring internet gambling disorder (Ponte & Griffiths, 2015). The instrument functions by asking nine Likert-based questions with a response range of 1 = 'never' and 5 = 'very often' and summing each participant's score. As such, participant's scores can range from 9 to 45 with higher scores representing a greater degree of an internet gambling disorder. A score of at least 36 is required to be considered a disordered online gambler. Based on the scoring of this instrument, in the VSE sample, of the 36 participants who completed the IGDS-SF9, six participants (16.7 per cent) met the threshold for being classified as a disordered internet gambler. The mean score of the sample was 23.4 (SD = 9.14) with a range of 11 to 43. Given the small sample size of those who met the criteria for disordered internet gambling, no further analyses were conducted.

The authors created a Responsible Gambling Strategies scale to measure whether participants engaged in any responsible gambling strategies and how often participants violated these self-imposed strategies. Those who had gambled online in the past 12 months were asked about responsible gambling strategies specific to online gaming. In total, 28% of participants did not report using any responsible gambling strategies while gambling online; the average number of responsible gambling strategies while gambling online was 3.0 (SD = 2.3). Of those who reported gambling online at least once over the past 12 months, 81.1% (n = 30) reported setting a financial limit on how much money they would put at risk at least some of the time (see Table 3). However, only four of these participants (13.3 per cent) indicated that they never went over their financial limits (see Table 4). Conversely, nearly half of those who had self-imposed financial limits (46.6 per cent) indicated that they 'most of the time' or 'all of the time' went over their self-imposed financial limits. Except for thinking about taking a break during an online gambling session, all the other responsible gambling strategies were considered by only a minority of participants with large proportions of participants indicating that they never set a limit of how long they would gamble in one online session (73 per cent) or placed a limit the number of days that they would gamble online (81.1 per cent). In other words, participants who engaged in online gaming rarely used responsible gambling strategies to limit their gaming.

**TABLE 3: THINKING ABOUT RESPONSIBLE GAMBLING BEHAVIOURS ONLINE IN PAST 12 MONTHS (N = 37)**

| | None of the Time | Some of the Time | Most of the Time | All the Time |
|---|---|---|---|---|
| Set a financial limit on how much money was put at risk | 18.9% | 32.4% | 29.7% | 18.9% |
| Set a time limit on how long one would gamble | 73.0% | 10.8% | 10.8% | 5.4% |
| Limit on number of days one would gamble | 81.1% | 5.4% | 10.8% | 2.7% |
| Think about taking a break during online gambling session | 40.5% | 35.1% | 21.6% | 2.7% |
| Think about switching to playing online for fun rather than money | 51.4% | 37.8% | 5.4% | 5.4% |
| Think about tracking wins and losses | 62.2% | 18.9% | 18.9% | 0 |
| Think about telling a significant other when gambling online | 62.2% | 21.6% | 8.1% | 8.1% |
| Think about stopping to gamble online | 8.1% | 29.7% | 43.2% | 18.9% |

Furthermore, as outlined above, while a minority of participants considered one or more responsible gambling strategies, among those who did, only a small minority of participants complied with their self-imposed strategies. For example, among the behaviours listed in Table 4, the one with the greatest proportion of success was taking a break during an online session. Here, 42.9% of participants indicated that they never violated this condition when they set a limit. However, for the most part, participants violated their own self-imposed strategies at least 'some of the time'. The Responsible Gambling Strategies Scale may provide some important insights into problem gambling behaviours and suggest areas to focus education; however, further comparison with non-problem gambling samples is recommended to determine the extent to which the failure to use these responsible gambling strategies is characteristic of problem gamblers compared to gamblers in general.

**TABLE 4: VIOLATING SELF-IMPOSED RESPONSIBLE GAMBLING BEHAVIOURS ONLINE IN PAST 12 MONTHS**

| | None of the Time | Some of the Time | Most of the Time | All the Time |
|---|---|---|---|---|
| Go over self-imposed financial limit (n = 30) | 13.3% | 40.0% | 23.3% | 23.3% |
| Go over self-imposed time limit (n = 10) | 0 | 60.0% | 30.0% | 10.0% |
| Go over self-imposed limit on number of days one would gamble (n = 7) | 42.9% | 0 | 42.9% | 14.3% |
| Take a break during online gambling session (n = 22) | 18.2% | 63.6% | 9.1% | 9.1% |
| Switch to playing online for fun rather than money (n = 18) | 11.6% | 66.7% | 11.1% | 11.1% |
| Track wins and losses (n = 14) | 7.1% | 50.0% | 21.4% | 21.4% |
| Tell a significant other when gambling online (n = 14) | 28.6% | 21.4% | 28.6% | 21.4% |
| Stop gambling online (n = 34) | 26.5% | 52.9% | 17.6% | 2.9% |

There are many reasons why people may prefer online gambling to visiting a land-based casino or bingo hall. In this sample, the most common motivations were around the issues of convenience and comfort. For example, 89.4% indicated that they agreed or strongly agreed with the statement that they did not have to travel to gamble, that it was convenient (85.1 per cent), that it was less intimidating than gambling at a land-based venue (49.2 per cent), that online gambling provided anonymity (44.6 per cent), that it was more comfortable gambling online (31.9 per cent), and that it was safer to gamble at home than at a land-based venue (31.9 per cent). For the most part, smaller

proportions of participants agreed or strongly agreed with statements related to gambling more directly. For example, 40.5% of participants agreed or strongly agreed that they could play for free, could play at lower stakes (38.3 per cent), could play more than one game at a time online (34.1 per cent), and 19.2% agreed or strongly agreed that online gambling provided a chance to practice gambling skills. Of note, nearly one-third of participants (29.8 per cent) agreed or strongly agreed that they had more control over their gambling when playing online.

Participants reported spending approximately one-third of their total online time during the week gambling. Specifically, participants reported spending, on average, 6.1 hours during the week (Monday to Friday) online engaged in recreational activities; however, 2.9 of these hours were spent, on average, gambling online. This relationship was lower over the weekend. Here, participants reported spending, on average, 4.5 hours engaged in recreational activities online, but only 1.7 of these hours gambling online. In total, on average, participants spent 34% of their recreational online time engaged in gambling activities. Finally, for this sub-sample of participants who engaged in online gambling in the past year, one-fifth (19.6 per cent) tried to stop gambling online by using an internet site blocker and none attempted to stop their online gambling by disconnecting their internet. When asked if there were any other ways clients had attempted to stop online gambling, many participants indicated that they used the VSE program to stop their online gambling. Of note, only three participants reported having their online gambling accounts cancelled or deleted as a way of stopping their online gambling.

### SUPPORTS TO REDUCE OR STOP GAMBLING

The entire sample were provided with a list of 12 supports related to gambling and asked to identify whether they had ever accessed any of the listed supports to assist with stopping to gamble. If they had accessed one or more supports, a follow up question was used to determine whether this support was accessed before or after their current enrollment in the VSE program. As demonstrated in Table 5, except for a previous enrollment in a self-exclusion program (63.8 per cent), most participants had never accessed other forms of support to try to stop gambling. Of note, nearly three-quarters of the sample (73.8 per cent) reported that they had used self-control in the past to stop their gambling and more than one-quarter of the sample (27.5 per cent) had accessed a problem gambling counselor at some point in the past. Of note, 6.3% of the sample (n = 8) reported speaking with a psychiatrist or counsellor who was not specifically a gambling counselor to address their gambling. It is also important to note that, while only a very short amount of time had passed from when the participant enrolled in VSE and completed the T1 interview, only a very small proportion of participants combined their current self-exclusion with other types of support. For example, only 5.5% of participants accessed a problem gambling counselor after their current enrollment in the VSE program and only 4.7% of participants accessed Gambler's Anonymous.

**TABLE 5: PARTICIPANTS ACCESS OF SUPPORTS TO STOP GAMBLING (N = 128)**

| | No | Yes – Before Current VSE Enrollment | Yes – After Current VSE Enrollment |
|---|---|---|---|
| Gambler's Anonymous | 80.3% | 15.0% | 4.7% |
| Problem Gambling or GAM Info Helpline | 88.9% | 9.5% | 1.6% |
| Problem Gambling Counselor | 72.4% | 22.0% | 5.5% |
| GAM Info Rep Service | 96.8% | 2.4% | 0.8% |
| Gamtalk or other online Counseling | 96.8% | 2.4% | 0.8% |
| GameSense Advisors at gaming venue | 88.9% | 11.1% | 0 |
| GameSense Info Centre (but not visit with GameSense Advisor) | 97.6% | 2.4% | 0 |
| BCLC Customer Support Representative | 92.1% | 7.9% | 0 |
| Previous enrollment in self-exclusion | 36.2% | 63.8% | 0 |
| Self-control | 26.2% | 71.4% | 2.4% |
| Talking to other support, such as family or friends | 38.1% | 57.9% | 4.0% |
| Looked for information or resources online | 68.3% | 29.4% | 2.4% |

All participants were administered the Problem Gambling Severity Index (PGSI) and were scored according to the scoring method proposed by Currie et al. (2013). In this scoring procedure, the range of scores could be from 0 to 27 with a score of 0 indicating non-problem gambling, a score of 1 to 4 indicating a low level of problems with few or no identified negative consequences, a score of 5 to 7 indicating a moderate level of problems leading to some negative consequences, and a score of 8 or more indicating problem gambling with negative consequences and possible loss of control In this sample, the mean score was 13.9 (SD = 6.3). More specifically, 1.6% of the sample scored a 0, 5.6% scored in the low level of problems category, 8.0% scored in the moderate level of problems, and 84.8% scored in the problem gambling range.

While not part of the PGSI, participants were also asked whether they had claimed to be winning money gambling, but really were not. In total, half the sample reported that they had never done this, while 20.3% reported that they did this 'most of the time' or 'almost always'. On the issue of whether participants had ever hidden betting slips, lottery tickets, gambling money, or other signs of gambling from their spouse, children, or other important people in their lives, 43.0% reported that they had never done this while one-quarter reported that they did this 'most of the time' or 'almost always'. Finally, on the issue of losing time from work or school due to gambling, 71.1% of the sample reported that this had never occurred, while only 4.6% reported that this happened 'most of the time' or 'almost always'.

Participants were assessed using the Gambling Motives Questionnaire (GMQ) by Stewart and Zack (2008). This scale breaks gambling behaviour down into three principal subscales of social motives, enhancement motives, and coping motives by asking five questions related to each subscale. Financial motives were also included by asking participants four questions based on the research of Dechant (2014). Participants were asked how often they did each of the items using a 4-point Likert scale anchored by 'never or almost never' to 'always or almost always'. The subscale with the highest average score was the Enhancement motives scale (14.4) that focuses on gambling because one liked the feeling, because it was exciting, to get a 'high' feeling, because gambling was fun, and because it felt good. The mean score on this scale reflected that participants 'often' or 'always or

almost always' gambled to enhance their mood. The next highest average score was for coping motives (11.0). Coping motives were measured by participants' gambling to relax, forget their worries, to feel more confident or sure of themselves, to help them when they felt nervous or depressed, or to cheer up when in a bad mood. The participant's average score on this scale reflected that they 'sometimes' or 'often' gambled as a coping mechanism. Finally, the average scores of participants indicated that they 'sometimes' gambled for social motives (8.5), such as to celebrate, because it was what their friends did when they got together, or to be sociable. The sample's mean score for financial motives (10.4) indicated that participants were 'sometimes' or 'often' the motivation for gambling. This subscale measured how often participants gambled to win money, because they enjoyed thinking about what they would do if they won a jackpot, because winning would change their lifestyle, and to earn money. Therefore, when considering implications for treatment or education, enhancement motivations were most common in this sample followed by coping and financial motivations and then social motives.

To assess the strength of participants' irrational beliefs and attitudes towards gambling, the Gambling Attitudes and Beliefs Scale-23 by Bouju et al. (2014) was used. This instrument categorizes gambling beliefs and attitudes into the five subscales of strategies, luck, attitudes, chasing behaviours, and emotions. It uses a 4-point Likert scale anchored by strongly agree and strongly disagree with higher scores indicating a higher degree of agreement with the statement. In this sample, attitudes ($X$ = 19.9, SD = 6.8) and emotions ($X$ = 18.7, SD = 7.3) had the highest mean scores. The attitude subscale measures aspects like acting calm, confident, and being a gracious winner, while gambling emotions referred to feeling alive or excited when gambling, feeling angry when losing, and using gambling to forget problems or as a 'pick me up'. Attitudes and emotions were followed by strategies ($X$ = 15.3, SD = 8.7) and chasing ($X$ = 15.3, SD = 7.4). The strategies subscale measured items like believing there are betting strategies that can help you win any game, believing that roulette was more skilled based than the lottery, that notion that one must be familiar with a game to win, and to be successful at winning, it was necessary to identify winning streaks. The chasing subscale measured items, such as not liking to quit when losing, believing that if one had been losing all their bets, they were due for a big win, thinking that one should continue betting if they have been winning, believing that if one was losing, it was important to continue playing to get even, and thinking that one's luck was about to change if they had been losing. Finally, the luck subscale had an average score of 13.0 (SD = 10.0) and measured items such as believing that some people were unlucky, believing that some people were lucky to have around them when gambling, and carrying a lucky charm. Like the findings related to the GMQ scale above, these findings should be used to inform areas for education and reinstatement after the VSE program.

PGSI total scores were correlated against the GMQ and GABS subscales and all scales were statistically significantly and positively correlated with the PGSI total, to varying degrees of strength (see Table 6).

**TABLE 6: PGSI CORRELATIONS WITH THE GMQ AND GABS SUBSCALES**

| | Correlations with the PGSI |
|---|---|
| GMQ Social Motives | .198* |
| GMQ Enhancement Motives | .356*** |
| GMQ Coping Motives | .385*** |
| GMQ Financial Motives | .474*** |
| GABS Strategies | .276** |
| GABS Luck | .194* |
| GABS Attitudes | .198* |
| GABS Chasing | .415*** |
| GABS Emotions | .420*** |
| *\* p < .05, \*\* p < .01, \*\*\* p < .001* | |

In total, 102 participants were assessed on the Positive Play Scale by Wood et al. (2007) designed to measure responsible gaming. There are two main scales each composed of seven statements on a seven-point Likert scale. The first scale measures gambling behaviours and is comprised of the subscales of Honesty and Control (three statements), and pre-commitment (four statements). Each of these seven statements is anchored by 'never' and 'always'. Honesty and control refer to how honest gamblers are with others about their gambling and the degree to which gamblers feel in control of their gambling behaviour. Pre-commitment focuses on the extent to which gamblers consider the amount of time and money spent gambling (Wood et al., 2007). Of the seven statements composing the PPS-Behaviour scale, the statement with the highest individual ranking was 'I only spent time that I could afford to spend' ($X$ = 4.5) from the Pre-commitment subscale indicating that participants sometimes or often did this, while the items with the lowest ranking were 'I was honest with my family and/or friends about the amount money I spent gambling' from the Honesty and Control subscale, and 'I only gambled with money that I could afford to lose' from the Pre-commitment subscale (see Table 7). Both had an average ranking of 3.5 indicating that participants either 'rarely' or 'sometimes' did this.

**TABLE 7: AVERAGE SCORES ON POSITIVE PLAY SCALE – BEHAVIOUR STATEMENTS (N = 100-102)**

| | Average (SD) |
|---|---|
| *Honesty and Control* | |
| I felt in control of my gambling behaviour | 3.8 (1.8) |
| I was honest with my family and/or friends about the amount of money I spent gambling | 3.5 (2.3) |
| I was honest with my family and/or friends about the amount of time I spent gambling | 3.7 (2.4) |
| *Pre-commitment* | |
| I only gambled with money that I could afford to lose | 3.5 (2.2) |
| I only spent time that I could afford to spend | 4.5 (2.1) |
| I considered the amount of money I was willing to lose before gambling | 4.2 (2.0) |
| I considered the amount of time I was willing to spend before gambling | 3.9 (2.1) |

The second main PPS scale is gambling beliefs that measures the subscales of personal responsibility (four statements) and gambling literacy (three statements; two of which require

reverse scaling prior to analysis). Each of these seven statements is anchored on a Likert scale by 'very strongly disagree' and 'very strongly agree'. Personal responsibility refers to the degree to which a gambler believes they should take personal ownership over their gambling, while gambling literacy focuses on the extent to which people have an accurate understanding about the nature of gambling (Wood et al., 2007). The lowest ranked items on the belief scale were 'If I gamble more often, it will help me win more than I lose' and 'If I gamble more often it will help me win more than I lose" from the Gambling Literacy sub-scale. Both items were rescaled prior to analysis. Participants ranked these statements at an average of 5.4, midway between 'mildly agree' and 'strongly agree' (see Table 8). Conversely, the highest ranked item was 'I should only gamble when I have enough money to cover all my bills first' from the Personal Responsibility subscale, which had an average ranking of 6.4 indicating that participants tended to 'strongly' to 'very strongly agree' with this statement.

**TABLE 8: AVERAGE SCORES ON POSITIVE PLAY SCALE – BELIEF STATEMENTS (N = 99-102)**

|  | Average (SD) |
|---|---|
| *Personal Responsibility* |  |
| I should be able to walk away from gambling at any time | 5.5 (1.5) |
| I should be aware of how much money I spend when I gamble | 6.0 (1.2) |
| It is my responsibility to spend only money that I can afford to lose | 6.2 (0.9) |
| I should only gamble when I have enough money to cover all my bills first | 6.4 (1.0) |
| *Gambling Literacy* |  |
| Gambling is not a good way to make money | 6.2 (1.4) |
| My chances of winning *DO NOT** get better after I have lost | 5.4 (1.9) |
| If I gamble more often, it will  *NOT** help me win more than I lose | 5.4 (1.8) |
| *\*Reflects what is being measured after the statement was recoded* |  |

Rather than compute total scores, the scale authors advise that classifications of low (1-3), medium (4-5), or high (6-7) be made based on the lowest score that a person receives on each subscale. For example, someone who indicated they were 'often' not in control of their gambling behaviour would score a five for that statement, but if they 'rarely' were honest with their friends and family about the amount of money they spent gambling, they would receive a score of three. As their scoring would be assigned based on their lowest scoring statement for that subscale, which, in this example, would be a three, they would be classified as 'low' on the Honesty and Control Behavioural subscale. Using this process and excluding any participant who did not answer all the statements within each of the subscale, participants were assigned to the low, medium, and high categories for each of the four subscales. As shown in Table 8a, the largest percentage of participants scored in the 'high' group when it came to Gambling Literacy, meaning that they tended to agree that gambling was not a good way to make money, that their chances of winning do not get better after a loss, and that gambling more often does not help them to win more than they lose. This was closely followed by Personal Responsibility, meaning that participants consistently tended to rank statements, including the belief that they should be able to walk away from gambling at any time or that they should only gamble when they have enough money to cover their bills, as a strongly agree (6) or as a very strongly agree (7). Conversely, the largest percentage of participants scored in the low

category for Pre-Commitment, closely followed by Honesty and Control, indicating that they very strongly disagreed (1), strongly disagreed (2), or mildly disagreed (3) with at least one of the statements on each of these scales.

**TABLE 8A: LOW, MEDIUM, HIGH PPS SUBSCALE SCORES (N = 98-102)**

| | % Low | % Medium | % High |
|---|---|---|---|
| PPS Behaviour – Honesty and Control | 67.3% | 25.7% | 6.9% |
| PPS Behaviour – Pre-Commitment | 69.7% | 19.2% | 11.1% |
| PPS Beliefs – Personal Responsibility | 20.6% | 25.5% | 53.9% |
| PPS Beliefs – Gambling Literacy | 29.6% | 15.3% | 55.1% |

The authors of this report also computed total scores to correlate the PPS with other measures. The total score on the Behaviour scale ranged from 7 to 49, with an average of 27 (SD = 8.9). The total score on the Beliefs scale ranged from 28 to 49 and the average was 41.0 (SD = 5.4). In other words, the participants scored, on average, much higher on the PPS Beliefs scale than on the Behaviour scale. In fact, the PPS Behaviour scale score was not statistically significantly correlated with the PPS Belief scale score.[6] The PPS scale total scores were then correlated with the PGSI total score. The PGSI total score was significantly negatively correlated with the PPS Behaviour scale score; however, it was not statistically significantly correlated with the PPS Belief scale score.[7] This result supports that the PPS is measuring two distinct constructs. Furthermore, when correlations were run at the subscale level, the PGSI total score was statistically significantly and negatively associated with both the Honesty and Control ($r$ = -.295, p = .003) and Pre-commitment ($r$ = -.393, p < .001) subscales, but was not statistically significantly associated with the Personal Responsibility subscale ($r$ = -.015, p > .05) or Gambling Literacy subscale ($r$ = -.043, p > .05). These patterns suggest that when a participant is feeling in control of their gambling and being honest with loved ones about their gambling, and that when they are making sure to consider how much money and time they were willing to spend prior to gambling, they were more likely to exhibit lower levels of problem gambling symptoms. These findings could be relevant for responsible gambling education programs and awareness strategies.

Similar to the questions presented in Tables 3 and 4 in relation to online gambling, all participants were asked the Responsible Gambling Strategies Scale questions related to how often they had particular thoughts or engaged in particular behaviours while gambling in person or in a gaming venue in the past 12 months. Again, participants used between zero and eight strategies. The average number of strategies used was larger ($X$ = 4.9, SD = 1.9) than in the online version of the scale, and the modal number of strategies used was six (24.2 per cent). As demonstrated in Table 9, the most commonly used strategies among participants were to think about not going to the casino and setting a financial limit on how much money they would place at risk during a gambling session. However, most or nearly a majority of participants did not think about tracking their wins

---

[6] $r$ (94) = .081, p > .05

[7] $r$ (96) = -.442, p < .001; $r$ (95) = -.041, p > .05

and losses (58.1 per cent), limiting the number of days they would gamble per week (55.1 per cent), setting a limit on how much time one would gamble in a single session (49.6 per cent), or thinking about telling someone that they were going to a casino or some other gambling facility (45.7 per cent). Moreover, a minority of participants (41.3 per cent) thought about taking a break during a gambling session only 'some of the time'.

**TABLE 9: RESPONSIBLE GAMBLING STRATEGIES CONSIDERED BY PARTICIPANTS IN PAST 12 MONTHS (N = 128)**

| | None of the Time | Some of the Time | Most of the Time | All the Time |
|---|---|---|---|---|
| Set a financial limit on how much money was put at risk | 18.1% | 29.9% | 30.7% | 21.3% |
| Set a time limit on how long one would gamble | 49.6% | 29.1% | 15.0% | 6.3% |
| Limit on number of days one would gamble | 55.1% | 26.8% | 9.4% | 8.7% |
| Think about taking a break during a gambling session | 38.9% | 41.3% | 13.5% | 6.3% |
| Think about leaving your bank cards at home when going gambling | 30.7% | 32.3% | 22.8% | 14.2% |
| Think about tracking wins and losses | 58.1% | 25.0% | 9.7% | 7.3% |
| Think about telling a significant other when you were going to a casino or other gambling facility | 45.7% | 26.8% | 14.2% | 13.4% |
| Think about not going to a casino or gambling facility | 8.7% | 29.1% | 43.3% | 18.9% |

Among those participants who identified thinking about or setting some form of limit to gamble more responsibly, most did not adhere to their self-imposed behaviours (see Table 10). For example, more than one-third of participants (39.8 per cent) who reported that they thought about leaving bank cards at home when going to a gambling facility indicated that they never did so. However, nearly half (46.6 per cent) indicated that they did leave bank cards at home 'some of the time'. On a positive note, for the most part, around half of participants who thought about or did impose some behaviours of time or money limits to gamble more responsibly only violated these conditions 'some of the time'. However, approximately one-quarter (26 per cent) of those who indicated that they set some financial limit prior to gambling reported always violating this self-imposed restriction. Similarly, one-fifth of those who set a limit on the amount of time they would gamble during a single session reported always violating this time constraint.

**TABLE 10: VIOLATED SELF-IMPOSED RESPONSIBLE GAMBLING THOUGHTS AND BEHAVIOURS IN PAST 12 MONTHS**

| | None of the Time | Some of the Time | Most of the Time | All the Time |
|---|---|---|---|---|
| Go over self-imposed financial limit | 2.9% | 41.3% | 29.8% | 26.0% |
| Go over self-imposed time limit | 10.9% | 45.3% | 23.4% | 20.3% |
| Go over self-imposed limit on number of days one would gamble | 14.0% | 50.9% | 19.3% | 15.8% |
| Take a break during a gambling session | 17.9% | 64.1% | 9.0% | 9.0% |
| Left bank cards at home | 39.8% | 46.6% | 8.0% | 5.7% |
| Track wins and losses | 29.6% | 44.4% | 13.0% | 13.0% |
| Tell a significant other when going to a gambling facility | 15.9% | 46.4% | 27.5% | 10.0% |
| Made the decision to not go to a gambling facility | 19.8% | 63.8% | 12.1% | 4.3% |

When asked who was responsible for stopping them from gambling on a five-point scale anchored by 'none at all' to 'completely', as demonstrated in Figure 6, participants identified themselves, followed by the VSE program, BCLC, and family members as being responsible. More specifically, slightly more than three-quarters of participants (77.3 per cent) identified themselves as completely responsible for stopping themselves from gambling. Of note, nearly half of participants (45.3 per cent) believed that it was completely the responsibility of the VSE program to prevent their gambling. Conversely, a minority of participants felt that it was 'not at all' the responsibility of friends (49.2 per cent) or family (41.4 per cent) to prevent participant's gambling. And, while half of participants did not think that BCLC was at all responsible to stop their gambling behaviour, this declined to 20.3% for the VSE program. Finally, five participants (3.9 per cent) believed that they themselves did not have any responsibility for stopping their gambling. Still, on the five-point scale, the mean score for 'myself' having responsibility to stop their own gambling was 4.5.

**FIGURE 6: WHO HAS 'COMPLETE' RESPONSIBILITY TO PREVENT PARTICIPANT FROM GAMBLING (N = 128)**
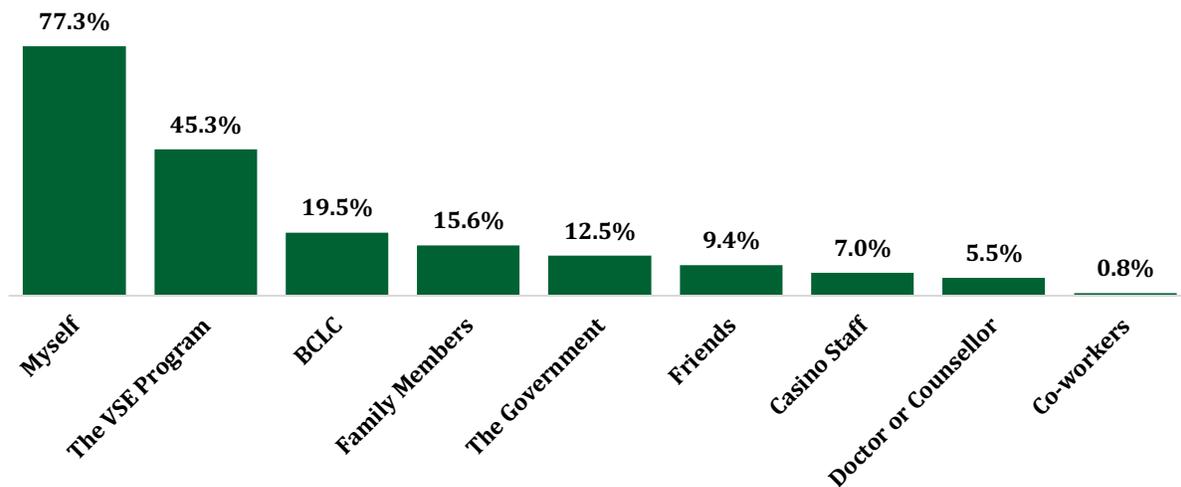


PGSI scores are an important way to assess the extent to which program participants experience risks for problem gambling. The previous study (Cohen et al., 2017; McCormick et al., 2018) demonstrated significant reductions in PGSI scores over time as VSE participants abstained from gambling. However, many of the PGSI statements measure consequences from gambling and do not reflect changes in thinking about or experiencing urges to gamble. Consequently, the authors developed a short Gambling Preoccupation Scale to measure the participants' thoughts about gambling at T1 and how those thoughts changed over the duration of the VSE program. The Gambling Preoccupation Scale, or GPS, askes participants how preoccupied they were with gambling over the past seven days using four statements: thinking about gambling, thinking about the consequences of their gambling, thinking about how it feels when they are gambling, and thinking about the urge to gamble. Those who endorse feeling the urge to gamble are then asked to reflect on how often they control that urge. Considering the first four statements, the GPS total

score ranged from 0 to 11 while the average score was 4.3 (SD = 2.4). It was statistically significantly strongly and positively correlated with the PGSI.[8]

At the item level, most participants (54.4 per cent) reported that they thought about gambling 'some of the time' over the past seven days, while 29.8% indicated that they had not thought about gambling at all and 3.5% reported that they thought about gambling 'all of the time'. When asked about how often they thought about the consequences of their gambling, about one-third of participants (35.1 per cent) reported 'some of the time' and a similar proportion (32.5 per cent) indicated 'most of the time'. On this issue, only 12.3% reported not thinking about the consequences of their gambling at all while one-quarter indicated that they thought about it 'all of the time'. When asked about how often they thought about how it felt to gamble, 6.1% reported doing so 'all of the time', but 31.6% indicated that they had not thought about it over the past seven days. Of note, 43% indicated that they had thought about the consequences of their gambling 'some of the time' over the previous seven days.

In terms of experiencing urges to gamble over the previous seven days, 40.4% reported not experiencing any urges and 2.6% reported feeling urges 'all of the time'. In total, 43.9% reported experiencing urges to gamble 'some of the time' over the previous seven days. Of those who reported experiencing urges to gamble over the previous seven days, 56.9% reported being able to control their urges 'all of the time' and another 29.2% indicated that 'most of the time' they were able to control their urges. Only one participant indicated that they were not able to control their urges in the previous seven days. Participants provided a wide range of ways they controlled their urges to gamble. These included finding another hobby, spending time with family and friends, working, speaking to a counsellor, attending Gambler's Anonymous meetings, staying at home, playing free slots or other gambling games on apps, working out, thinking about other things, thinking about their commitment to VSE, watching TV, and checking their bank accounts to realize they did not have money to gamble.

Participants completed the Gambling Consequences Scale by Reid et al. (2015), which is a 15-item scale that uses a four-point Likert scale anchored by 'has not happened' to 'has happened every day or almost daily' to assess various consequences that people experience because of their gambling behaviours and activities. Given the nature of the scale, scores can range from 15 to 55. In this sample, the mean score was 32.7 (SD = 10.9). More specifically, the types of consequences that were experienced by a majority of participants at least 'several times' over the past 12 months were experiencing unwanted financial losses because of gambling (70.3 per cent), negative mental health effects, such as depression, anxiety, or stress (60.1 per cent), an inability to become one's best self (63.7 per cent), and neglecting things that one normally enjoyed doing because of gambling (50.8 per cent). Conversely, most participants (55.5 per cent) reported that, in the past 12 months, they had never had their gambling interfere with their work, failed to keep important commitments because of their gambling (57.5 per cent), or experienced legal problems because of their gambling (83.5 per cent). Nearly half of the sample (44.9 per cent) reported that they had not emotionally hurt someone because of their gambling and 47.2% indicated that they had not betrayed trust in a

---

[8] *r* (109) = .410, p < .001

significant relationship because of their gambling in the past 12 months. The GCS was strongly, positively, and statistically significantly correlated with the PGSI.[9]

The Multidimensional Scale of Perceived Social Support (MSPSS) by Zimet et al. (1988) is a 12-item scale that uses a seven-point Likert scale anchored by 'very strongly disagree' to 'very strongly agree' to assess different sources of social support. With a range of four to 28, in this sample, significant others had the highest level of social support ($X$ = 21.6, SD = 6.0) followed by family ($X$ = 19.6, SD = 6.4) and friends ($X$ = 18.0, SD = 6.7). More specifically, as demonstrated in Table 11, a large majority of participants (82.1 per cent) agreed that they had a special person with whom they could share their joys and sorrows. The same proportion of participants agreed that there was a special person in their lives who cared about their feelings. Conversely, 39.8% disagreed that they had friends that really tried to help them and 30.5% disagreed with the statement that they could count on their friends when things went wrong. In effect, except for the statement that their friends really tried to help them (47.7 per cent), most participants agreed with all the items on the MSPSS. Moreover, for all items, between one-quarter and one-third of the sample selected 'strongly agree'. None of the MSPSS scale scores were significantly correlated with the PGSI.[10]

**TABLE 11: MULTIDIMENSIONAL SCALE OF PERCEIVED SOCIAL SUPPORT (N = 128)**

|  | Disagree | Neutral | Agree |
|---|---|---|---|
| There is a special person who is around when I am in need (significant other) | 14.8% | 9.4% | 75.8% |
| There is a special person with whom I can share my joys and sorrows (significant other) | 10.9% | 7.0% | 82.1% |
| My family really tries to help me (family) | 21.1% | 11.7% | 67.2% |
| I get the emotional help and support I need from my family (family) | 25.0% | 14.1% | 60.9% |
| I have a special person who is a real source of comfort to me (significant other) | 16.4% | 7.0% | 76.6% |
| My friends really try to help me (friend) | 39.8% | 12.5% | 47.7% |
| I can count on my friends when things go wrong (friend) | 30.5% | 10.2% | 59.3% |
| I can talk about my problems with my family (family) | 26.6% | 7.8% | 65.6% |
| I have friends with whom I can share my joys and sorrows (friend) | 20.3% | 11.7% | 68.0% |
| There is a special person in my life who cares about my feelings (significant other) | 14.8% | 3.1% | 82.1% |
| My family is willing to help me make decisions (family) | 21.1% | 10.2% | 68.7% |
| I can talk about my problems with my friends (friend) | 28.1% | 9.4% | 62.5% |

The Depression, Anxiety, and Stress Scale (DASS21) by Lovibond and Lovibond (1995) can be used to assess the severity of range of symptoms related to depression, anxiety, and stress. In this sample, participants were asked to report on the 21 items over the 30 days prior to their current enrollment in the VSE. The response categories are presented with a four-point scale anchored by

---

[9] $r$ (115) = .727, p < .001

[10] MSPSS Family, $r$ (123) = -.002, p >.05; MSPSS Friends, $r$ (123) = .054, p > .05; MSPSS Significant Other, $r$ (123) = .054, p > .05.

'never' and 'almost always'.[11] The mean depression score in this sample of 14.1 (SD = 11.5) placed the sample in the moderate range, the anxiety mean score of 7.6 (SD = 7.9) was in the normal to mild range, and the stress mean score of 15.4 (SD = 10.7) was in the mild range. The PGSI was positively, strongly, and statistically significantly correlated with each of the Depression, Anxiety, and Stress scales.[12]

## VSE ENROLLMENT

Most participants (55.5 per cent) had heard of the VSE program more than one year prior to their enrollment. Nearly one-third had first heard of the VSE program between one month and 12 months prior to their enrollment. Finally, 13.3% (n = 17) had first heard of the VSE program immediately before enrolling. In considering things that might have prevented participants from enrolling in the VSE program prior to when they finally did, as demonstrated in Table 12, the most commonly reported reasons were being worried about not being able to gamble (54.4 per cent), ashamed to admit to oneself that they needed to stop gambling (50.0 per cent), and not liking the stipulation that they could not withdraw from the program if they changed their mind after enrolling (38.9 per cent). Clearly, some of the information about the program was known to participants prior to enrolling as only a very small proportion (8.7 per cent) believed that enrolling in the VSE program meant they had to attend counselling and 15.1% reported not knowing about the program earlier. It would also appear that some of the deterrent elements of the program were not perceived as an impediment to enrolling as only 12.8% were concerned about any possible penalties associated with violating their VSE agreement. Of note, slightly more than one-quarter of the sample (27.2 per cent) indicated that there were no reasons why they had not enrolled earlier as they reported enrolling as soon as they felt they needed the program. Notably, two-thirds of participants (65.6 per cent) had already used the VSE program in the past, and so may have been aware of the program but not using it until they felt the need again more recently to do so.

**TABLE 12: REASONS FOR NOT ENROLLING EARLIER IN THE VSE PROGRAM (N = 126)**

| | |
|---|---|
| Worried about not being able to gamble | 54.4% |
| Ashamed to admit to myself that I needed to stop gambling | 50.0% |
| Did not like being unable to withdraw from the program if I changed my mind | 38.9% |
| I enrolled as soon as I needed it | 27.2% |
| Worried others would find out I enrolled | 26.2% |
| Worried that I would not be able to stop gambling even if I enrolled | 18.8% |
| Did not know about the program earlier | 15.1% |
| Worried about the penalties if I violated the agreement | 12.8% |
| Thought I had to attend counselling if enrolled | 8.7% |

[11] The DASS-21 scale scores can be multiplied by two to compare the sample statistics to normed population means. Alternatively, a second scale is provided with suggested cut-offs using the summed totals. In the current report, the scale scores were multiplied by two.

[12] Depression, $r$ (123) = .510, p < .001; Anxiety, $r$ (122) = .477, p < .001; Stress, $r$ (121) = .496, p < .001.

The was no single dominant way that participants heard about the VSE program. The most common ways were casino literature or VSE marketing (57.9 per cent) followed by friend(s) (31.0 per cent), and fellow gambler(s) (30.2 per cent). Some of the least common ways that participants heard about the VSE program were the PlayNow website (8 per cent), Gamblers Anonymous (7.9 per cent), BCLC Customer Support Representatives (6.5 per cent), and a co-worker (4.8 per cent). While casino literature or VSE marketing was somewhat common, the data in Table 13 indicates that casino staff, GameSense advisors, and BCLC's website could possibly do more to advertise the VSE program and to discuss it with patrons.

**TABLE 13: HOW PARTICIPANTS HEARD ABOUT THE VSE PROGRAM (N = 126)**

| | |
|---|---|
| Casino Literature or VSE Marketing | 57.9% |
| Friend(s) | 31.0% |
| Fellow Gambler | 30.2% |
| Family | 27.8% |
| Casino Employee – Security | 25.2% |
| GameSense Advisor | 18.3% |
| Casino Employee – Pit Boss/Dealer/Other Floor Staff | 17.6% |
| Doctor or Counsellor | 12.2% |
| BCLC.com | 11.1% |
| Online Literature or Advertising other than at BCLC.com or PlayNow.com | 10.5% |
| Problem Gambling or GAM info Helpline | 8.7% |
| PlayNow.com | 8.0% |
| Gambler's Anonymous | 7.9% |
| BCLC Customer Support Representative | 6.5% |
| Co-worker | 4.8% |

While more than one-quarter of the sample (26.2 per cent) reported that one of the reasons they did not enroll in the VSE program as soon as they heard about it was because they were worried that others would find out they had enrolled in the program, two-thirds of participants indicated that they told friends about their enrollment and 85.9% told family members. However, only approximately one-fifth of participants (21.0 per cent) told their place of work, and a similar proportion (21.4 per cent) told their doctor or counsellor. In effect, only six participants (5.3 per cent) indicated that they told no one they had enrolled in the VSE program.

Participants were asked to recollect what day of the week they enrolled in the VSE program. As demonstrated in Figure 7, the most common day of the week for enrollment was Tuesday followed by Friday and Sunday. However, except for Thursdays, there was very little difference in the day of the week that participants chose to enroll in the VSE program. It would be interesting to determine whether the data presented in Figure 7 corresponded to the volume of people who attend casinos or bingo halls each day of the week. Approximately two-thirds of participants (65.9 per cent) enrolled in the VSE program in the afternoon (between 12:00 and 18:00), while an equal proportion of participants (17.0 per cent each) enrolled between 6:00 and 12:00 and between 18:00 and 24:00.

**FIGURE 7: DAY OF THE WEEK PARTICIPANTS ENROLLED IN THE VSE PROGRAM (N = 128)**
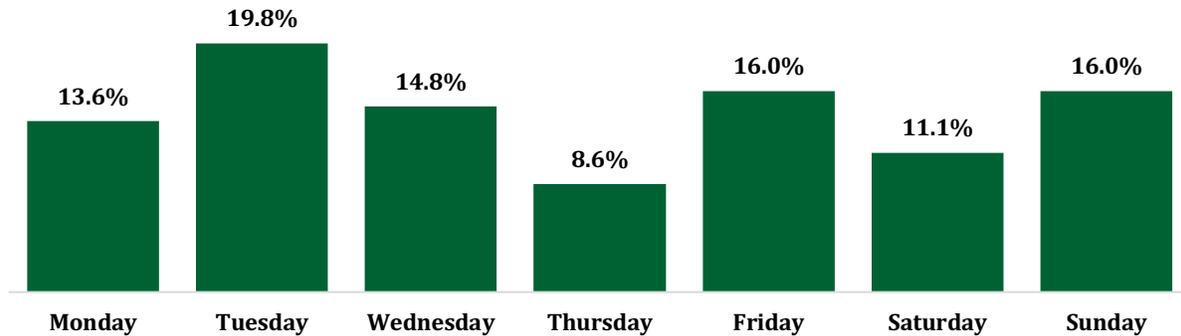


In terms of the length of time that participants enrolled in the VSE program for, more than one-quarter (27.6 per cent) enrolled for six months, 19.7% enrolled for one year, 10.2% enrolled for two years, and nearly half of the participants (42.5 per cent) enrolled for three years (see Figure 7A).

**FIGURE 7A: LENGTH OF TIME PARTICIPANTS ENROLLED IN THE VSE PROGRAM FOR (N = 128)**
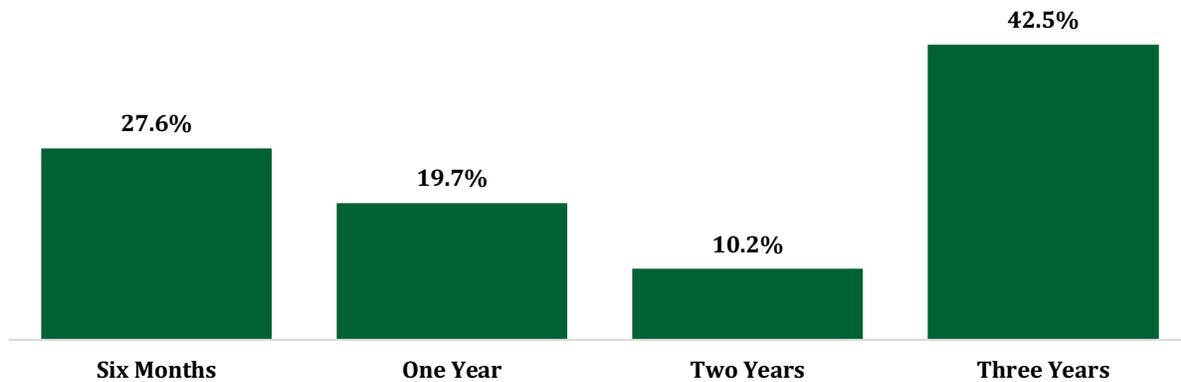


In terms of overall satisfaction with the amount of time one enrolled for, most participants (82.8 per cent) were satisfied with the length of time they selected to be in the VSE program. Of note, among those who enrolled for six months, 82.9% were satisfied with this decision, for those who enrolled for one year, 84.0% were satisfied with their decision. Everyone who selected to be in the VSE program for two years (n = 13) were satisfied with their choice and 77.8% of participants who selected three years were satisfied with their choice. Enrollments lengths were crosstabulated

against whether participants had previously enrolled in the VSE; the result was not statistically significant.[13]

For those who selected six months, some of the comments provided by participants about the reasons for selecting this amount of time included thinking one year would be too long, believing that they could always add more time if needed, and feeling that this amount of time seemed reasonable and controllable. Some participants were scared to select a longer amount of time even though they wanted to, and others felt that six months was a good amount of time to try the VSE program out or that this amount of time was an appropriate amount of time to take a break from gambling. Finally, some believed that a longer commitment seemed like too much time. For those who selected the one-year option, comments included that it was long enough to gain control over one's gambling, was enough time to gain control over one's finances, and it provided sufficient time to improve one's mental health and to address one's gambling addiction. Some of the comments from those who selected the two-year option included that it was a good amount of time to deal with one's gambling addiction, provided a very good amount of time away from gambling, was an adequate amount of time to repair one's financial situation, and provided an adequate amount of time to focus on physical and mental health. The main reason provided for selecting the three-year option was a desire or need to stop gambling entirely. Some believed that three years was the amount of time one needed to gain control over their gambling while others mentioned that three years was the longest amount of time they could select. On that note, many participants, regardless of the amount of time they enrolled in the VSE program for, stated that they wished that there was a lifetime ban available, and that they would have selected that option if it was possible.

Many of the comments mentioned above were again reflected in the question of why participants enrolled in the VSE program. Participants were provided with a list of options where they could choose multiple reasons for their enrollment. Some of the most reported reasons were because of a gambling problem (94.5 per cent), to save money (92.8 per cent), because the VSE program had worked for the participant in the past (72.1 per cent), and because it seemed like the only option (69.0 per cent). Some of the least common reasons were because someone gave the participant an ultimatum or pressured them to enroll (19.0 per cent), because the participant knew of others who had been helped by the VSE program (38.9 per cent), because the participant wanted to support someone else's attempt to stop gambling (21.4 per cent), and because the participant wanted to take some time away from gambling to save money for some other purpose (34.0 per cent). When asked to specify from their list of selected reasons what the main reason for enrolling in the VSE program was, while two participants did not provide a response, a slight minority of participants (46.0 per cent) stated that it was to save money. This was followed by reporting that the participant had a gambling problem (27.8 per cent) (see Figure 8).

---

[13] $x^2$ (3) = 1.778, p > .05

**FIGURE 8: MAIN REASON FOR ENROLLING IN THE VSE PROGRAM (N = 126)**
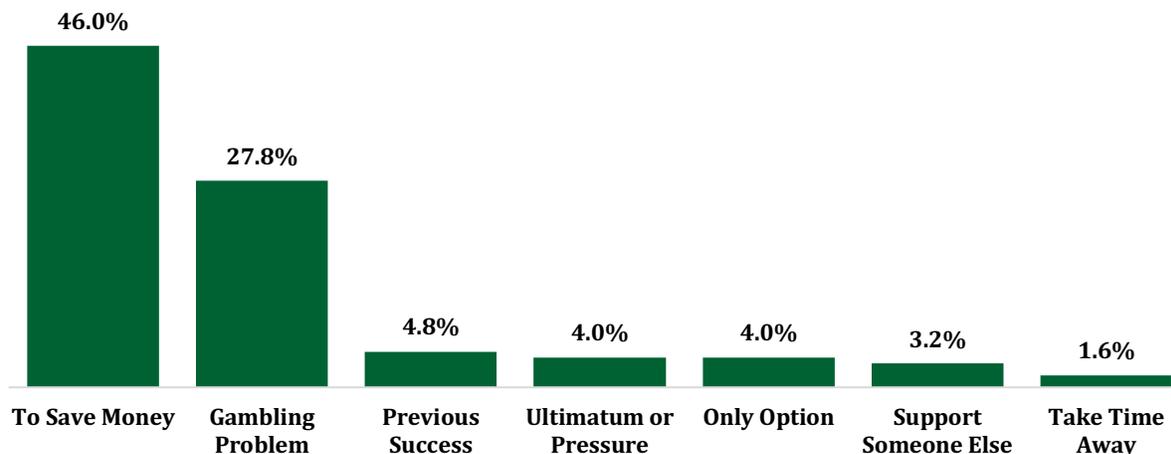


When asked if there were any other reasons why participants enrolled in the VSE program, two main themes emerged related to finances and mental health. More specifically, participants spoke of the financial toll that gambling took on them and the correlated decline in their mental health. Participants spoke of going broke or losing more money than they could afford to lose and feeling regret, low self-esteem, or depression because of their losses. Some participants identified that they had a lack of self-control, and that they were hopeful that the VSE program would assist them by removing the ability to gamble. Others spoke of the destructive effect that gambling had on their relationships and that enrolling in the VSE was an attempt to repair their relationships.

The authors adapted three statements used by Merkouris et al. (2017) regarding motivations for treatment. These were adapted to reflect participants' main goal when enrolling in the VSE program. The options provided by Merkouris et al. to measure motivations for problem gambling treatment were (1) to quit gambling altogether; (2) to quit the gambling activities I think I have an issue with; or (3) to cut back the gambling activities I think I have an issue with. Most commonly, participants in the current study indicated a desire to manage their gambling more effectively rather than to quit entirely. More specifically, 48.0% selected the 'to cut back the gambling activities I think I have an issue with' option. Still, 41.5% of participants selected the 'to quit gambling altogether' option. Only 10.6% selected the 'to quit the gambling activities I think I have an issue with' option. When asked if participants had ever enrolled in the VSE program specifically to manage or budget their finances, slightly more than one-third of the sample (38.3 per cent) stated that they had done so for these reasons. Given this, providing support and education to participants around budgeting for gambling or how to keep track of their gambling and non-gambling finances, as well as connecting participants to professionals and counselling who can assist in addressing the financial consequences of gambling, would be beneficial and should be considered for inclusion in a reinstatement program.

Only a very small proportion of participants (10.2 per cent) reported that they had ever visited a GameSense Information Centre. For those who did (n = 13), nearly half (46.2 per cent) said they did

so to obtain information about the odds of winning and losing at various casino games, and the same proportion reported doing so to learn how to gamble responsibly. Moreover, 92.3% of those who reported visiting a GameSense Information Centre did so to obtain information about the VSE program, and nearly two-thirds (61.5 per cent) did so to learn about supports available to help stop gambling. While a majority (53.8 per cent) of those who visited a GameSense Information Centre did so to receive information about problem gambling counselling, only approximately one-quarter of participants (23.1 per cent) did so to obtain information about participating in an educational activity about how gambling worked. Of note, among those who visited a GameSense Information Centre, a slight minority (46.2 per cent) reported that their visit did not play a role in their decision to enroll in the VSE program, while 30.8% stated that it 'somewhat' affected their decision, and 23.1% stated that it 'definitely' affected their decision.

Table 14 provides the distribution of where the VSE enrollments took place. Of note, 40.1% of all enrollments occurred at Starlight Casino in New Westminster, Great Canadian Casino in Nanaimo, and River Rock Casino in Richmond. It is unknown if these patterns represent the overall provincial patterns in VSE enrollments.

**TABLE 14: LOCATION OF WHERE PARTICIPANTS ENROLLED IN THE VSE PROGRAM (N = 128)**

| | n |
|---|---|
| Billy Barker - Quesnel | 6 |
| Chances - Abbotsford | 2 |
| Chances - Kelowna | 4 |
| Chances – Maple Ridge | 3 |
| Chances – Port Alberni | 1 |
| Chances – Courtney / Comox | 4 |
| Cloverdale Casino | 2 |
| Elements - Cloverdale | 9 |
| Hard Rock - Coquitlam | 2 |
| Starlight Casino – New Westminster | 17 |
| Fraser Downs Racetrack and Casino - Surrey | 6 |
| Gateway Grand Villa - Burnaby | 6 |
| Great Canadian Boulevard Casino - Coquitlam | 3 |
| Great Canadian Nanaimo Casino - Nanaimo | 14 |
| Lake City Casino - Kelowna | 4 |
| Lake City Casino - Penticton | 2 |
| Lake City Casino - Vernon | 7 |
| Parq Casino - Vancouver | 1 |
| River Rock Casino - Richmond | 18 |
| Treasure Cove Casino – Prince George | 6 |
| A Commercial Bingo Hall | 1 |
| BCLC Headquarters - Vancouver | 3 |

At the time of enrollment, only slightly more than one-quarter (27.3 per cent) of participants brought someone with them for support. Moreover, only three participants (2.4 per cent) brought a support professional who was not a GameSense Advisor with them to enroll in the VSE program.

According to the information provided by participants, it appears that the training that security staff received about enrolling clients into the VSE program has been extremely positive and helpful. In terms of the security staff who completed their enrollment, all but two participants (98.4 per cent) agreed or strongly agreed that the security staff were sensitive to their needs, all but one participant (99.2 per cent) felt that the security staff were understanding, and all but four participants (96.9 per cent) felt that the security staff made them feel comfortable (see Table 15). Similarly, 94.5% of participants stated that the security staff read the entire VSE contract to them, 96.8% of participants said that security staff explained each part of the contract to them, and 96.9% of participants reported that the security staff who enrolled them made sure they understood the rules and procedures of the VSE program before signing the agreement. Likewise, 96.1% of participants agreed or strongly agreed that security staff provided information about counselling and the same proportion stated that security staff asked the participate if they wanted to be contacted by a gambling counsellor. Of note, slightly more than two-thirds of participants (69.6 per cent) reported that security staff encouraged them to consider counselling. Finally, 92.5% of participants agreed or strongly agreed that security staff explained the consequences of violating the VSE agreement. Given this, the two areas that the VSE program might want to reenforce to security staff who enroll VSE clients are in encouraging clients to consider counselling and recommending a length of time for enrollment in the program. Here, nearly one-third of participants (32.2 per cent) indicated that security staff recommended a length of time for enrollment in the program. Perhaps more guidance should be provided to security staff on whether and when it might be appropriate to suggest a length of time for enrollment in the VSE program, such as when first time clients are not certain about what length of time might be best for them.

While the overwhelming majority of participants had positive things to say about their enrollment process, there were some common themes mentioned by those who did not view the experience they had with the security staff that enrolled them as positive. The main themes were that there were parts of the process that were omitted, such as asking about the participant's interest in counselling, being made to feel like a criminal because of the need to take a photograph, not explaining all the consequences related to violating the agreement, that the process was cold, like a business transaction, and, for those who had already been in the program, some felt that going through the entire contract was a waste of time. It is recommended that BCLC ensure that those who enroll VSE clients take whatever time is required and necessary with each client to make sure that the client feels comfortable with their decision to enroll and that the process reenforces the notion that the client is entering into the agreement voluntarily, that the client has not done anything wrong, and that BCLC is concerned primarily with the wellbeing of the client.

A slight majority of participants (53.5 per cent) reported that there was a GameSense Advisor present during their enrollment. Like the findings presented above, nearly all participants who had a GameSense Advisor with them during enrollment had positive things to report about the GameSense Advisor (see Table 15). While a slightly higher proportion of participants (75.4 per cent) indicated that their GameSense Advisor encouraged them to consider counseling compared to security staff (69.6 per cent), the VSE program should ensure that GameSense Advisors always encourage VSE clients to consider counselling options. Moreover, more than one-third of participants (37.0 per cent) stated that the GameSense Advisor recommended a length of

enrollment. The VSE program should ensure that all GSAs are aware of when it is and is not appropriate to make suggestions about the length of time a VSE client should enroll in the program.

**TABLE 15: PARTICIPANTS' VIEW OF SECURITY STAFF AND GSA DURING CURRENT ENROLLMENT IN THE VSE PROGRAM (N = 128)**

|  | Security Staff | GameSense Advisor |
|---|---|---|
| Sensitive to my needs | 98.4% | 98.5% |
| Understanding | 99.2% | 100% |
| Made me feel comfortable | 99.2% | 98.5% |
| Read the entire contract to me | 94.5% | 95.3% |
| Explained each part of the contract to me | 96.8% | 98.4% |
| Made sure I understood the rules and procedures of the VSE program | 96.9% | 100% |
| Provided information on counselling and other support services | 96.1% | 98.5% |
| Asked if I wanted to be contacted by a professional who could talk about problem gambling | 96.0% | 95.3% |
| Encouraged me to consider counselling | 69.6% | 75.4% |
| Explained the consequences of violating my agreement | 94.5% | 96.9% |
| Recommended a length of enrollment | 31.2% | 37.0% |

Two-thirds of participants (67.0 per cent) agreed or strongly agreed that the room they were in when enrolling in the VSE program made them feel comfortable. However, nearly all participants (96.1 per cent) believed that the room gave them the privacy they needed. Similarly, 97.6% indicated that the room was quiet, and slightly more than four-fifths of participants (82 per cent) felt that the room's location allowed them to exit the gaming venue in a respectful manner. When asked to provide any additional comments, several participants stated that the office used for their enrollment was not very clean or organized, that all the locked doors that people had to go through made the process feel uncomfortable, unwelcoming, and intimidating, and that the exit from the enrollment room needed to be further away from the gaming area. Some participants reported that they had to walk through the casino to exit, which was uncomfortable, and others indicated that the office they used was an employee's office and that person had to leave their office for the participant to be enrolled, which made them feel uncomfortable. Finally, some participants stated that because the office used for their enrollment was a security office, the space felt uncomfortable, cramped, dirty, dark, and uninviting. While not the case in all venues, it is recommended that, if possible, the security office not be used for enrollment as some participants reported that using the security office made them feel as if they had done something wrong and having to leave the security office and be escorted out of the casino through the casino was embarrassing. This was especially true for some participants who enrolled in the VSE program in casinos in smaller towns where people were more likely to know each other. Given that the VSE enrollment process may be a particularly emotionally distressing time, especially for first-time clients, BCLC may want to examine the potential to implement trauma-informed practices to better support VSE participants during their exclusion enrollment.

This recommendation is supported by the data obtained on emotional states experienced by participants at the point of enrollment that demonstrate that at the time of enrolling, participants

recall being in a highly negative emotional state. All participants were administered a modified short form of the Positive Affect Negative Affect Scale (PANAS) that consists of words that describe different feelings and emotions over a specific length of time. The original PANAS by Watson et al. (1988) consists of 20 statements, 10 measuring Positive Affect and 10 measuring Negative Affect. A subset of these were used in the current study. They were combined with an additional six statements specifically introduced to measure the participants feelings in terms of the VSE program. On Table 16, the items added by the authors are indicated by a +.

Participants were requested to think about how they felt immediately before starting the VSE program enrollment process and how they felt immediately after completing the VSE enrollment process. Participants were asked to provide a number between one and five for each word where one represented 'not at all' and five represented 'extremely'. Ten positively phrased items (excited, strong, guilty, enthusiastic, proud, inspired, determined, happy, relieved, confident, and satisfied) were computed into a modified Positive Affect subscale while eight negatively phrased items (distressed, upset, guilty, scared, ashamed, nervous, confused, and regretful) were computed into a modified Negative Affect subscale.

 Table 16 presents the mean scores for the same word immediately before and immediately after the enrollment process. Positively for the VSE process, for all words, the changes were in the direction VSE hoped for. For example, while the mean score related to the word 'distressed' immediately before enrollment would be classified as moderate, after enrollment, the level of 'distressed' was reduced to a little. Moreover, participants' levels of being upset, guilty, scared, ashamed, nervous, and regretful were all decreased after enrollment, while feeling excited, strong, enthusiastic, proud, inspired, happy, relieved, confident, and satisfied increased immediately after completing the VSE enrollment process. The positive feelings that increased the most, on average, were happy and proud and the negative feelings that were reduced the most, on average, were distressed, upset, and guilty. Positive affect increased significantly by five points, while negative affect decreased significantly by five points. Overall, all means changed statistically significantly between pre- and post-enrollment, except for the terms 'determined' and 'confused'.

**TABLE 16: MEAN PANAS SCORES IMMEDIATELY BEFORE AND AFTER ENROLLMENT IN THE VSE (N = 128)**

| | Immediately Before Enrollment | Immediately After Enrollment |
|---|---|---|
| Distressed | 3.02 | 1.85*** |
| Excited | 2.76 | 3.19** |
| Upset | 2.72 | 1.86*** |
| Strong | 3.30 | 3.88*** |
| Guilty | 3.01 | 2.18*** |
| Scared | 2.26 | 1.76*** |
| Enthusiastic | 2.99 | 3.50*** |
| Proud | 3.41 | 4.02*** |
| Ashamed | 2.73 | 2.15*** |
| Inspired | 3.02 | 3.56*** |
| Nervous | 2.72 | 2.08*** |
| Determined | 3.96 | 4.07 |
| Happy+ | 3.15 | 3.79*** |
| Relieved+ | 3.86 | 4.25*** |
| Confused+ | 1.55 | 1.47 |
| Regretful+ | 2.43 | 1.89*** |
| Confident+ | 3.49 | 3.85*** |
| Satisfied+ | 3.44 | 3.95*** |
| Modified Positive Affect Scale | 33.6 | 38.5*** |
| Modified Negative Affect Scale | 20.2 | 15.2*** |
| + indicates items that were added by the authors; *p < .05, **p < .01, ***p < .001 | | |

Based on the Quality of Life (EURSIS-QOL) 8 item scale, participants were asked to assess several aspects of their life on a 5-point Likert scale anchored by 'very poor' and 'very good' in the 30 days prior to their current enrollment in the VSE program. The mean overall rating for the sample on their quality of life was 3.2 (SD = 1.2) suggesting 'neither good nor poor'. However, 45.9% of participants selected either 'good' (32.3 per cent) or 'very good' (12.6 per cent). When asked about having enough energy for everyday life, the mean score was again 3.2 (SD = 1.3) suggesting a moderate level of energy; however, nearly one-third of participants (31.3 per cent) reported 'mostly' having enough energy for everyday life and an additional 15.6% indicated that they 'completely' had enough energy. On the issue of having enough money to meet one's needs, the mean score was 3.1 (SD =1.4), which fell into the 'moderately' category. Here, 28.3% reported 'mostly' having enough money and another 19.7% reported 'completely'. However, approximately one-fifth of participants (19.7 per cent) selected 'not at all'.

When asked about their health in the 30 days prior to enrolling, the mean score was 3.1 (SD = 1.1) suggesting 'neither satisfied nor unsatisfied'. However, 41.4% of participants selected either 'satisfied' (32.8 per cent) or 'very satisfied' (8.6 per cent). Only 9.4% of participants indicated that they were 'very dissatisfied' with their health. In terms of their ability to perform their daily living activities, the mean score was 3.4 (SD =1.1), which fell into the 'neither satisfied nor unsatisfied'. However, most participants (53.6 per cent) selected either 'satisfied' (39.4 per cent) or 'very satisfied' (14.2 per cent). Only 3.9% of participants indicated that they were 'very dissatisfied' with their ability to perform their daily living activities. When asked how satisfied participants were

with themselves, the mean score was 2.7 (SD =1.3), which placed the sample at the higher end of the 'dissatisfied' category. Here, only one-third of participants selected either 'satisfied' (25.4 per cent) or 'very satisfied' (7.9 per cent). Conversely, 21.4% of participants indicated that they were 'very dissatisfied' with themselves and an additional 24.6% reported being 'dissatisfied' with themselves in the 30 days leading up to enrolling in the VSE program. While no explicit connection was sought between feeling dissatisfied with oneself and enrolling in the VSE program, given that this question asked participants to consider how they felt about themselves in the days leading up to enrolling in the program, it is possible that a general feeling of dissatisfaction with oneself was a factor in deciding to enroll in the VSE program.

The final two questions of the EURSIS-QOL focused on personal relationships and living conditions. In terms of personal relationships, the mean score was 3.1 (SD = 1.2) suggesting 'neither satisfied nor unsatisfied'. However, 49.6% of participants selected either 'satisfied' (39.4 per cent) or 'very satisfied' (10.2 per cent). In total, 11.8% of participants indicated that they were 'very dissatisfied' with their personal relationships. Finally, on the issue of being satisfied with the conditions of their living place, the mean score was 3.7 (SD = 1.2) again suggesting 'neither satisfied nor unsatisfied'. However, 63.8% of participants selected either 'satisfied' (33.1 per cent) or 'very satisfied' (30.7 per cent). Only 6.3% of participants indicated that they were 'very dissatisfied' with the condition of their living place.


### Violations of the VSE Agreement

While the 'time at risk' was very short, given that the Time 1 interview was conducted within weeks of program enrollment, 94.5% of participants stated that they had never tried to return to a gaming facility in British Columbia since enrolling in the VSE program. Of the remaining seven participants, four reported that they had tried to enter a gaming facility in British Columbia only once, two participants had done so only a few times, and one reported trying a few times per week. Of these seven participants, all but one went to a different facility than where they typically gambled at to try to avoid being detected. In terms of being successful at entering a casino or gaming facility in British Columbia without being recognized while excluded, only two of the seven participants indicated that they were never able to do so successfully. The other five participants reported that they were successful some of the time (n = 1), most of the time (n = 2), or all the time (n = 2).

While the sample of violators at Time 1 was extremely small (n = 7), when asked why they chose to violate their agreement, the majority of participants identified not thinking that they would get caught (n = 5), did not think that anything would happen if they got caught (n = 5), because they were bored (n = 4), and because they felt the urge to gamble (n = 6). Conversely, only one participant said they violated their VSE agreement because they needed money and three participants violated because they felt lucky; however, none violated because they were under the influence of alcohol or drugs. One participant violated because they were pressured by friends, and two violated because they were feeling depressed or anxious. While it was encouraging to see that few participants had attempted to violate their agreement, the small sample size precluded any further analysis.

For those who did not violate the conditions of their VSE agreement, participants were asked to provide all the reasons they had not violated (see Table 17). The most reported reasons had to do with personal reasons, such as wishing to stay abstinent from gambling (96.6 per cent) and keeping a promise to oneself to not gamble (95.8 per cent). Only a slight minority or slight majority of participants identified obstacles put in place by BCLC designed to prevent excluded people from entering the casino as reasons for not violating their agreements. For example, 44.5% of those who had not violated their VSE agreement reported that they were worried about being caught by casino security and 44.0% were concerned about the consequences they might face if they were caught in the casino while excluded. However, two-thirds of participants who did not violate their agreement indicated that one of the reasons was knowing they would not be paid out for winning a jackpot while excluded. Of note, a loss of self-control (30.1 per cent) and concern about losing money (47.9 per cent) was only a concern for a minority of participants. When asked if there were any other reasons why participants did not violate their VSE agreement, some participants reported that they were determined to quit gambling or had lost the desire to gamble, while others stated that their conscience, a desire to follow the rules, because they knew they were not allowed to enter a casino, and because they were enjoying their lives more now that they were no longer gambling as reasons for not violating their VSE agreement.

**TABLE 17: REASONS FOR NOT VIOLATING ONE'S VSE PROGRAM AGREEMENT (N = 119)**

| | |
|---|---|
| Determined to stay abstinent from gambling | 96.6% |
| Determined to keep promise to myself that I would not gamble | 95.8% |
| I knew I would not be paid out for any jackpots I won while excluded | 66.1% |
| Determined to keep promise to someone else that I would not gamble | 57.6% |
| Worried about embarrassing myself if caught in a casino or gaming facility | 53.5% |
| Worried about losing money in a casino or gaming facility | 47.9% |
| Worried about getting caught by security | 44.5% |
| Worried about the consequences if caught | 44.0% |
| Worried about losing my self-control in a casino or gaming facility | 30.1% |

In this sample, nearly two-thirds of participants (65.6 per cent) had enrolled in the VSE program through a gaming facility, problem gambling counsellor, or BCLC's Headquarters prior to this current exclusion. The mean number of prior enrollments was 2.4 (SD = 2.0) with a range of one prior enrollment to 13 priors. Of note, only one participant reported enrolling 13 previous times and another reported enrolling seven previous times. With respect to previous violations, 42.9% of those who had previously enrolled in the VSE reported that they had tried to violate their agreement. Few participants indicated that they had violated their current agreement, keeping in mind the short amount of time between the current enrollment and the interview, and the closure of gaming facilities because of the COVID-19 pandemic. Still, overall, 39 participants (30.5 per cent) attempted to violate during the current or prior enrollment. There was a statistically significant difference when considering PGSI scores for those who had attempted to violate ($X$ = 15.8, SD = 6.4)

and those who had never attempted to violate ($X$ = 13.1, SD = 6.1).[14] Of those who had attempted to violate their VSE agreement, nearly two-thirds (63.9 per cent) had been caught by the casino. Of those who had violated during a previous enrollment, only one had attempted to violate during their current VSE agreement.

Participants were asked to compare their previous enrollment experiences to their current enrollment experience. Importantly, only 3.6% (n = 3) reported that their current enrollment process was worse than their previous ones. Moreover, while 52.4% stated that their current enrollment process was the same, 44.0% stated it was better. For those who rated their current enrollment experience as worse than before, this rating was based on the room being worse this time and feeling like an idiot when the security staff had to go through the entire contract as they were familiar with the process. For those who thought the enrollment experience was better, the main themes were having an expectation and understanding of what the process of enrollment would be like this time making it less stressful, having the GameSense Advisor in the room this time made participants feel more comfortable and that someone cared about what they were going through, the room where the enrollment occurred was better, feeling more confident in their decision to enroll because they had gone through the program before, that the people doing the enrollment were more professional and did a better job of explaining the enrollment process and the way the program worked, and that the entire enrollment process took less time than in the past.

## COUNSELLING AND OTHER SUPPORT SERVICES

At the time of their current enrollment in the VSE program, only one-third of participants (34.6 per cent) remembered consenting to have their names released to a problem gambling support professional or counsellor; an additional 11.8% did not recall if they consented to this. Of note, three participants indicated that they were already enrolled in problem gambling counselling when they enrolled in the VSE program. Of those who consented to have their names forwarded (n = 44), a minority (44.2 per cent, n = 19) reported that a GAM Information Representative had contacted them about counselling after their enrollment in the VSE program. Most of the participants who were contacted by a counsellor and could recall when they were contacted indicated that this contact occurred within one week of enrolling in the VSE program. One participant indicated that they were contacted two weeks after enrollment and another participant indicated that they were contacted within one month of enrolling in the VSE program.

Of those who signed up for gambling counselling, slightly more than one-third of participants (37 per cent) indicated that the VSE program played no role in this decision. Another one-quarter of participants (23.9 per cent) stated that the VSE program played a 'little role' in their decision to sign up for gambling counselling, while one-fifth (19.6 per cent) stated that the VSE program played 'a lot' of a role in their decision to sign up for gambling counselling. Of note, another one-fifth of participants (19.6 per cent) stated that the VSE program was 'completely' responsible for their decision to sign up gambling counselling. Participants were asked the reasons why they decided to

---

[14] $t$ (123) = -2.31, p = .022

access counselling (see Table 18). Of the reasons provided, nearly all participants (91 per cent) indicated that they signed up for gambling counselling because they felt they had a problem. However, a slight majority of participants (57.8 per cent) also reported that they signed up for gambling counselling because they felt that they owned it to their family, partner, or friend(s). Similarly, a slight majority of participants (51.1 per cent) disclosed that they did not think they would be able to stop gambling without attending gambling counselling. In terms of misconceptions about the nature of the VSE program, only 13.3% of participants signed up for gambling counselling because they thought it was a requirement of the program.

**TABLE 18: REASONS FOR SIGNING UP FOR GAMBLING COUNSELLING (N = 45)**

| | |
|---|---|
| Felt as though I had a gambling problem | 91.1% |
| Felt as though I owed it to family, friends, or partner | 57.8% |
| Didn't think I could stop gambling without it | 51.1% |
| Needed to show someone that I was doing something about my gambling | 17.8% |
| Someone pressured me into it | 15.6% |
| Thought it was mandatory or required | 13.3% |

In addition to the options presented in Table 18, participants also provided additional reasons for signing up for gambling counselling. The main themes were that the counselling was free, that they would accept all the help available to them, because they needed someone to talk to about gambling problems, because they wanted to hear from others in a similar situation to the participants, and because gambling counselling addressed other issues, in particular mental health challenges. Consenting to having their name released to a counsellor was cross-referenced against PGSI scores; those who consented to having their name released exhibited statistically significantly higher PGSI scores ($X$ = 15.7, SD = 5.8) than those who did not ($X$ = 12.7, SD = 6.6).[15] However, it is important to note that both averages fell in the high-risk problem gambling category suggesting that nearly all participants would benefit from counselling. Of note, there was a statistically significant relationship between having enrolled in the VSE program before and consenting to having their name released to a counsellor. Participants who had enrolled in the VSE program before were significantly less likely to report consenting to having their name released (31.1 per cent) than those who had never been in the VSE program before (60.0 per cent).[16] This may be due to having attended counselling in the past; however, when prior enrollment was crosstabulated against having used counselling in the past, there was not a statistically significant relationship.[17] Conversely, this may suggest that the participant's first enrollment is a critical stage to encourage counselling as they may be less receptive to it during subsequent enrollments.

---

[15] $t$ (104) = -2.34, p = .021

[16] $x^2$ (1) = 8.26, p = .004

[17] $x^2$ (1) = .049, p > .05

Of the 66 participants who did not consent to have their names referred to a problem gambling support professional, most participants wanted to deal with their gambling issues on their own (54.5 per cent) and approximately half (49.2 per cent) believed that counsellors would not be able to speak the participant's primary language (see Table 19). Given this, those enrolling participants in the VSE program should make it a point to mention that counselling is available in many languages when asking whether the client would like to be referred to gambling counselling. Either one-third or nearly one-third of participants also indicated that they did not consent to be referred to gambling counselling because they had already used a problem gambling counsellor in the past or were already connected to gambling services (33.3 per cent), were concerned with confidentiality or someone finding out they were in treatment for gambling (32.3 per cent), or believed that they did not have time for counselling (30.3 per cent). On this last note, those enrolling individuals into the VSE program should emphasize the various forms that gambling counselling could take, such as in person and online, and should also mention that there is flexibility in the time of day that counselling could occur and that, for the most part, counselling is able to accommodate the schedule of the person seeking assistance.

Given that approximately one-quarter of this sub-sample of participants (25.3 per cent) indicated that they were unaware that counselling was available, BCLC should remind everyone responsible for enrolling clients into the VSE program to discuss counselling opportunities with clients and to reenforce that counselling is available for anyone enrolled in the VSE program. Moreover, as 10.8% of participants believed that they could not afford to go to counselling or treatment, those responsible for enrolling clients into the VSE program should ensure that they address this issue and provide accurate information about the potential costs, if any, associated with accepting the VSE's offer to make a referral on the client's behalf. While not specifically the role of BCLC to address, it is important to recognise the stigma related to counselling or needing help with gambling was somewhat evident in this sample as 19.7% of participants indicated that they were too ashamed to talk to anyone about their gambling issues, and 9.2% thought that their friends or family would make fun of them for going to treatment. Finally, there remained a small segment of the sample that believed that they did not need gambling counselling (13.6 per cent) or that they did not have a gambling problem that required counselling (9.1 per cent). In addition to these responses, one participant indicated that they did not have the energy to engage with counselling while another participant stated that talking about gambling with others, including a counsellor, made them want to gamble more, which was why they did not engage in gambling counselling.

**TABLE 19: REASONS FOR NOT CONSENTING TO BE CONTACTED BY A PROBLEM PROFESSIONAL (N = 66)**

| | |
|---|---|
| I wanted to deal with my gambling by myself | 54.5% |
| I didn't think they would speak my language | 49.2% |
| I have already used a problem gambling counselling in the past | 33.3% |
| I didn't want anyone else to know about my gambling | 32.3% |
| I don't have time to go to counselling or treatment | 30.3% |
| I didn't know it was available | 25.8% |
| I didn't think it could help me | 22.7% |
| I felt too ashamed to talk to anyone | 19.7% |
| I do not need gambling counselling | 13.6% |
| I couldn't afford to go to counselling or treatment | 10.8% |
| I thought my friends or family would make fun of me for going to counselling | 9.2% |
| I don't have a problem; I just needed a quick time-out from gambling | 9.1% |

Interestingly, the mean scores on the PGSI based on the reasons given for not consenting to counselling varied for two of the statements (see Table 20). Of particular interest, those who agreed that a reason for not accessing problem gambling counselling was that they did not think it would help them exhibited statistically significantly higher PGSI scores than those who did not agree with this statement.[18] Similarly, those who said that they had already used problem gambling counselling the past also exhibited statistically significantly higher PGSI scores than those who did not agree with this reason.[19]

**TABLE 20: AVERAGE PGSI SCORES BY REASONS FOR NOT CONSENTING TO COUNSELLING (N = 62)**

| | No | Yes |
|---|---|---|
| I wanted to deal with my gambling by myself | 12.5 | 12.5 |
| I didn't think they would speak my language | 13.5 | 11.7 |
| I have already used a problem gambling counselling in the past | 11.6 | 16.4* |
| I didn't want anyone else to know about my gambling | 12.3 | 12.7 |
| I don't have time to go to counselling or treatment | 12.7 | 11.9 |
| I didn't know it was available | 13.3 | 11.1 |
| I didn't think it could help me | 11.6 | 15.6* |
| I felt too ashamed to talk to anyone | 12.0 | 14.6 |
| I couldn't afford to go to counselling or treatment | 12.0 | 15.4 |
| I thought my friends or family would make fun of me for going to counselling | 12.7 | 11.3 |
| I don't have a problem; I just needed a quick time-out from gambling | 12.7 | 10.7 |
| *p < .05, ** p < .01, *** p < .001* | | |

---

[18] $t(60) = -2.11$, $p = .039$

[19] $t(60) = -2.30$, $p < .05$

The final three questions in the T1 interview asked about how important stopping or limiting one's gambling was to the participants, where stopping or limiting gambling was on participant's list of priorities, and how confident participants were in their ability to resist the urge to gamble. These three statements were from Merkouris et al.'s (2017) study. During the T1 interviews, on a scale of one to ten, where one was not important, five was neither important nor unimportant, and 10 was very important, the mean score for participants on how important stopping or limiting one's gambling was 9.1/10 (SD = 1.8) suggesting that this goal was very important to participants. More specifically, while 8.6% of the sample selected a number between one and five, 70.3% of the sample selected 10/10. In terms of the degree to which limiting or stopping gambling fit on participants' list of priorities, the mean score was 8.6/10 (SD = 1.9) again suggesting that this was very important. On this issue, 50.8% of the sample selected 10/10 and only 10.9% selected a number between one and five out of ten. Finally, on the issue of how confident participants were that they could resist an urge to gamble, the mean score was 7.6/10 (SD = 2.6). On this issue, only slightly more than one-third of participants (36.7 per cent) selected 10/10; however, a small proportion of participants (10.9 per cent) still selected a number between one and five out of ten.

PGSI scores were positively and statistically significantly correlated with the first two of these scales (Importance, and Priorities)[20] but were not significantly correlated with the Confidence scale. Conversely, the GPS was not statistically significantly correlated with the Importance or Priorities scale but was statistically significantly and negatively correlated with the Confidence scale.[21] These patterns suggest that experiencing consequences or harms from gambling at disordered levels was associated with appreciating the need to stop or cut back on gambling activities, but that continued preoccupation with thoughts about gambling were related to lower levels of confidence in being able to resist gambling going forwards.

## Psychometric Data

At the conclusion of the T1 interview, all participants were invited to participate in an additional interview that was designed to further explore potential reasons for gambling. This interview, termed the Psychometric Interview, was offered to 130 participants of whom 76 (58.4 per cent) consented and completed the Psychometric Interview. Two-thirds of the Psychometric subset were female (62.2 per cent), while the most common marital status was married (39.2 per cent), followed by single (17.6 per cent) or common law (14.9 per cent). The sample was bimodal with half of the sample reporting either completing some college (24.7 per cent) or completing a two-year diploma (24.7 per cent). One-quarter of the sample (26.0 per cent) reported that they had graduated high school or completed some high school, while the remaining 24.7% had completed either a degree, graduate studies, or a professional training program/degree. At the time of the interview, three-quarters (74.3 per cent) were employed. In total, 89.2% of the sample identified their primary language as English, and 70.3% of participants self-identified as Caucasian. Of note,

---

[20] Importance, $r$ (104) = .305, p = .001; Priorities, $r$ (104) = .345, p< .001.

[21] $r$ (96) = -.338, p < .001

9.5% of the sample self-identified as Indigenous, while another 9.5% self-identified as Asian. Over half of the participants (55.4 per cent) resided in the Lower Mainland, with another one-quarter (23.0 per cent) living in the Interior. Moreover, 16.2% of participants were living in Vancouver Island, and four (5.4 per cent) were living in the North. The Psychometric participants ranged in age from 20 years old to 83 years old but were, on average, 49.4 years old (SD = 16.2). Most commonly, participants reported earning a pre-tax income of between $50,000.00 and $99,999.00 (39.2 per cent) or between $20,000.00 and $49,999.00 (37.8 per cent) per year. The median was $20,000.00 to $49,999.00 per year.

PGSI scores ran from 0 to 27 with an average of 14.90 (SD = 6.04). As 90.3% of psychometric participants scored in the problem gambling range (8 or higher) at the time of the Psychometric interview, no analyses were run by problem gambling severity group. However, PGSI total scores were compared against other psychometric measures.

### MENTAL HEALTH MEASURES

Participants completed a series of mental health screens, including the Burns Depression Checklist, Generalized Anxiety Disorder 7-item scale, the AUDIT-C, DAST-2, and suicidal ideation.

#### *Burns Depression Checklist*

The Burns Depression Checklist (Burns, 1984) consists of 15 statements that measure the degree to which participants felt or had experienced 15 different indicators of depression over the past week using a four-point scale anchored by 'not at all' and 'a lot'. As demonstrated in Table 21, the most common indicator reported as being experienced 'a lot' in the past week was guilt. More specifically, one-quarter of the sample reported feeling guilt a lot over the past week. The next most common indicator (18.4 per cent) was experienced sleep changes 'a lot' over the past week. The indicators that were least likely to be reported in the past week were suicidal impulses, with nearly three-quarters (72.4 per cent) experiencing this 'not at all' in the past week, while 60% did not experience discouragement, and just over half (53.9 per cent) did not experience any irritability or frustration in the past week. At least half or more of the sample reported experiencing all other indicators at least 'somewhat' or 'moderately' over the past week.

**TABLE 21: DISTRIBUTION OF BURNS DEPRESSION CHECKLIST ITEMS (N = 74)**

|  | Not at All | Somewhat | Moderately | A Lot |
|---|---|---|---|---|
| Guilt | 23.7% | 34.2% | 18.4% | 23.7% |
| Sleep Changes | 25.0% | 31.6% | 25.0% | 18.4% |
| Loss of Motivation | 31.6% | 34.2% | 18.4% | 15.8% |
| Hypochondriasis | 26.3% | 43.4% | 14.5% | 15.8% |
| Loss of Libido | 46.7% | 25.3% | 13.3% | 14.7% |
| Indecisiveness | 23.7% | 48.7% | 13.2% | 14.5% |
| Poor Self Image | 36.8% | 35.5% | 14.5% | 13.2% |
| Appetite Changes | 47.4% | 32.9% | 6.6% | 13.2% |
| Sadness | 26.3% | 43.4% | 18.4% | 11.8% |
| Loss of Interest in Life | 59.2% | 21.1% | 10.5% | 9.2% |
| Inferiority | 46.1% | 32.9% | 14.5% | 6.6% |
| Low Self-Esteem | 46.1% | 36.8% | 13.2% | 3.9% |
| Irritability and Frustration | 53.9% | 34.2% | 7.9% | 3.9% |
| Discouragement | 60.0% | 30.7% | 6.7% | 2.7% |
| Suicidal Impulses | 72.4% | 21.1% | 5.3% | 1.3% |

The total score on the Burns Depression Checklist can range from 0 to 45. In the current study, the observed range was 0 to 37. The average score was 14.3 (SD = 9.04). Using the provided cut-points, the modal response was mild depression (35.1 per cent). Figure 9 displays the distribution of the sample over the five possible levels of depression. Most of the sample (59.5 per cent) indicated at least mild, moderate, or severe levels of depression while another one-quarter (23.0 per cent) exhibited borderline depression.

**FIGURE 9: BURNS DEPRESSION CHECKLIST CATEGORIES (N = 74)**
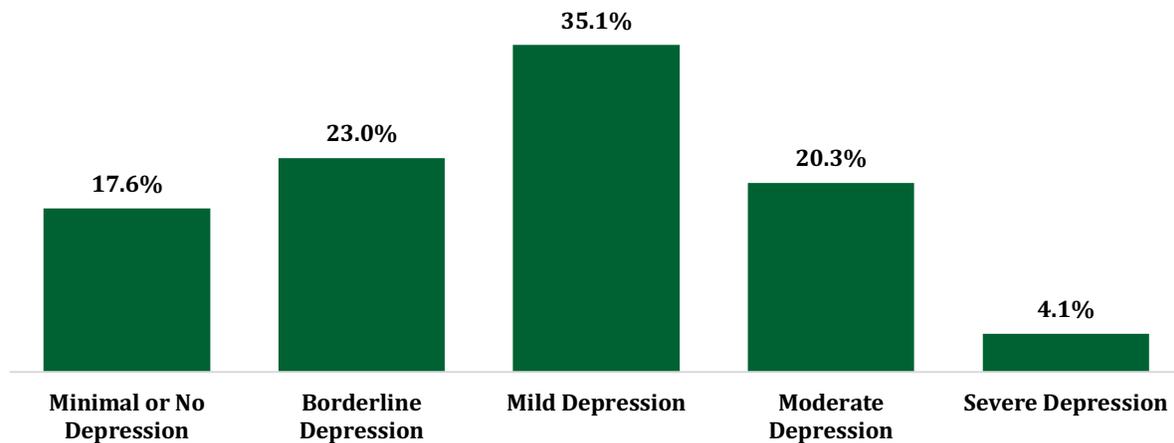
Total scores on the Burns Depression Checklist were strongly and positively correlated with total scores on the PGSI.[22] The average PGSI scores differed statistically significantly according to depression grouping.[23] Specifically, the differences were found when comparing the mean PGSI scores between those suffering from mild depression ($X = 16.8$, SD = 5.99) and those having borderline depression ($X = 11.7$, SD = 7.16).[24] Another difference was found when comparing those ranked as experiencing borderline depression and those ranked as having severe depression ($X = 22.67$, SD = 6.11).[25] No other group differences were found (minimal/no depression PGSI $X = 12.63$, SD = 3.95; moderate depression PGSI $X = 15.93$, SD = 4.28).

### *Generalized Anxiety Disorder*

The next mental health measure was the 7-item Generalized Anxiety Disorder scale (GAD-7). The seven items are measured on a scale of 0 = not at all; 1 = several days; 2 = over half the days; and 3 = nearly every day over the past two weeks. If any of these seven are endorsed, an additional question asked how difficult this/these have made it for the individual to work, take care of things at home, or get along with others. Table 22 provides the results for each of the seven items. The indicator most likely to be endorsed by the sample as happening nearly every day was worrying too much about different things. The indicator least likely to be experienced by the sample was feeling afraid as if something might often happen. Most participants experienced the symptoms either several days over the past two weeks or not at all, suggesting that, whereas their levels of depression were quite high, levels of anxiety were less prominent. Overall, 66 of the 76 participants (86.8 per cent) experienced at least one symptom of anxiety; however, 40.9% of these participants reported that the symptoms did not make it difficult at all to work, take care of things at home, or get along with others, while 48.5% reported that this level of anxiety made it 'somewhat difficult'.

**TABLE 22: GENERALIZED ANXIETY DISORDER 7-ITEM SCALE (N = 75)**

|  | Not at All | Several Days | Over Half the Days | Nearly Every Day |
|---|---|---|---|---|
| Worrying too much about different things | 29.3% | 46.7% | 10.7% | 13.3% |
| Trouble relaxing | 40.0% | 33.3% | 14.7% | 12.0% |
| Unable to stop or control worrying | 38.7% | 40.0% | 10.7% | 10.7% |
| Becoming easily annoyed or irritable | 40.5% | 41.9% | 9.5% | 8.1% |
| Feeling afraid as if something awful might happen | 62.2% | 24.3% | 8.1% | 5.4% |
| Feeling nervous, anxious, or on edge | 45.3% | 34.7% | 14.7% | 5.3% |
| Being so restless that it's hard to sit still | 58.7% | 26.7% | 9.3% | 5.3% |

---

[22] $r$ (68) = .363, p = .002

[23]  $F$ (4, 65) = 4.03, p = .006

[24] Mean PGSI scores were compared by groups using Tukey's post-hoc analyses for a one-way ANOVA. These means differed significantly from each other at p = .045.

[25] These means differed significantly from each other at p = .023.

The GAD-7 total scores can range from 0 to 21. In the current sample, the scores ranged from 0 to 18. The average was 5.77 (SD = 4.74). In total, 41.1% of the sample did not show any symptoms of anxiety, while another 41.1% showed mild symptoms (scoring five through nine). One-in-ten (11 percent) showed moderate levels of anxiety (scoring 10 through 14) and 6.8% experienced severe levels of anxiety (as indicated by a score of 15 or higher). The GAD-7 total scores were statistically significantly moderately and positively correlated with PGSI total scores, $r$ (67) = .286, p = .017.

### *Alcohol Use Disorder*

The AUDIT-C was used as a three-item screen for problematic alcohol use or possible alcohol abuse/dependence. The AUDIT-C total score can range from 0 through 12; a score of four or higher for males or three or more for females indicates likely hazardous drinking or alcohol use disorder. Nearly one-third of the sample (29.3 per cent) indicated that they did not drink alcohol, one-quarter (24.0 per cent) drank alcohol monthly or less, and one-fifth drank alcohol either two to four times per month (18.7 per cent) or two to three times per week (17.3 per cent). One in ten (10.7 per cent) drank alcohol four or more times per week. Of the participants who drank alcohol, most (81.1 per cent) had one or two standard drinks per day, 7.5% had between three and four drinks per day, 3.8% had five to six drinks per day, and 7.5% had seven to nine drinks per day. Half of the participants (55.4 per cent) reported never binge drinking, which was defined as drinking six or more drinks on one occasion. However, nearly one-quarter of participants (23.2 per cent) indicated that they did this less than monthly, while one in ten (10.7 per cent) did so monthly. Another 7.1% engaged in weekly binge drinking, and 3.6% acknowledged binge drinking daily.

When these three items were computed together, the scores on the AUDIT-C ranged from 0 to 11. The average score was 3.39 (SD = 2.42). Total scores were not distributed normally as there were two outlying cases with scores of 10 and 11. The remaining scores were distributed between 0 and 8. As the AUDIT-C scores are gender-based, the data was split into male and female participants. The average score for males was just below the cut-off for hazardous drinking/alcohol use disorder ($X$ = 3.78, SD = 2.56, range 1 to 11) but the average score for females exceeded the cut-off ($X$ = 3.24, SD = 2.4, range 0 to 10). The data for males was not distributed normally; however, the data for females was. Overall, more than one-third of males (38.9 per cent) and over half of females (55.9 per cent) met or exceeded the cut-off for hazardous drinking/alcohol use disorder.

There was no significant relationship when considering AUDIT-C total scores and the PGSI total score, either for the sample as a whole or when considering males versus females. Nor did the average PGSI scores differ significantly when considering whether participants met the cut-off for hazardous drinking/alcohol use disorder.

### *Drug Abuse Screening Test*

A brief two-item screening tool was used to measure drug abuse. The two-item Drug Abuse Screening Test (DAST-2) was demonstrated by Tiet et al. (2017) to be a valid screening tool for drug abuse. The two items measure how many days in the past 12 months participants have used drugs other than those required for medical reasons, and how many days in the past 12 months

they felt bad or guilty about their drug use. A non-zero response on the first item was demonstrated by Tiet et al. (2017) to meet the criteria for drug use disorder and a non-zero response on the first item indicated negative consequences from drug use.

Neither measure was distributed normally in the current sample. Whereas nearly four out of every five participants (78.9 per cent) reported not using drugs in the past 12 months, the distribution was skewed by the remainder of the sample. In particular, four participants indicated that they had used drugs every day in the past 12 months. Considering the entire sample, including these extreme scores, the average number of days where drugs were used was 28.2 out of the past 365 days. However, the median was 0. Of those who had used drugs in the past 365 days, most (60.0 per cent) did not feel bad or guilty about it. The average number of days drug using participants felt bad or guilty about their drug use was 9.4 days. When the number of days they felt bad or guilty was computed into a percentage of the number of days they used drugs, one-fifth of drug-using participants felt bad or guilty 100% of the time they used drugs. When comparing the number of days participants used drugs in the past year to the PGSI total scores, the correlation was not statistically significant.

### Suicidal Ideation

Participants were asked whether, over the past year, while still gambling, they had thought about harming themselves because of their problems with gambling. One-fifth (20.0 per cent) of participants stated that they had thought about harming themselves. They were then asked whether they had ever attempted to harm themselves. One participant had, while the rest reported that they had not. Those who reported suicidal ideation because of their problems with gambling had statistically significantly higher scores on the PGSI ($X$ = 19.87, SD = 4.05) than those who did not experience suicidal ideation due to their gambling ($X$ = 13.63, SD = 5.87).[26]

### Stress Proneness

A 7-item scale created by Reid (personal communication) was tested to measure proneness to stress. Each statement is measured on a five-point scale anchored by 'Never' and 'Very Often'. Participants were asked to apply this scale to statements about how they experienced difficult challenges in their life. The modal responses to each statement, with two exceptions, was 'sometimes'. Specifically, 'I feel overwhelmed' (33.3 per cent), 'I feel frustrated about things that are beyond my control' (26.7 per cent), 'Life feels overly stressful for me' (34.7 per cent), 'I feel overburdened by my commitments and obligations' (29.3 per cent), and 'the demands on my time feel unmanageable' (37.0 per cent) (see Table 23). The exceptions were 'my life feels like it's more challenging than most other people I know', where the modal response was 'never' (28.0 percent), and 'the pace of my life feels very difficult or impossible to maintain', which was bimodal at 'never' (28.4 per cent) and 'rarely' (28.4 per cent).

---

[26] $t$ (69) = -3.87, p < .001

**TABLE 23: DESCRIPTIVES FOR THE STRESS PRONENESS SCALE (N = 75)**

| | % Sometimes | Average (SD) |
|---|---|---|
| I feel overwhelmed | 33.3% | 3.1 (1.2) |
| I feel frustrated about things that are beyond my control | 26.7% | 3.2 (1.3) |
| Life feels overly stressful for me | 34.7% | 2.8 (1.2) |
| My life feels like it's more challenging than most other people I know | 24.0% | 2.7 (1.4) |
| I feel overburdened by my commitments and obligations | 29.3% | 2.8 (1.3) |
| The pace of my life feels very difficult or impossible to maintain | 24.3% | 2.4 (1.2) |
| The demands on time feel unmanageable | 37.0% | 2.5 (1.1) |

A total stress proneness score was summed. This ranged from 7 to 35, with an average of 19.3 (SD = 7.0). The total stress proneness score was significantly positively and strongly correlated with the total PGSI score.[27] However, further research will need to be conducted to explore the underlying factor structure of this scale to determine whether a total score is appropriate for use.

### *Emotional Regulation*

The 18-item Difficulty in Emotional Regulation Scale (DERS-18; Victor & Klonsky, 2016) consists of 18 statements measured on a five-point scale anchored by 'Almost Never' and 'Almost Always'. The 18 statements have been empirically divided into six subscales: Awareness (lack of awareness of one's emotions), Clarity (lack of clarity about the nature of one's emotions), Nonacceptance (lack of acceptance of one's emotions), Strategies (lack of access to effective emotion regulation strategies), Goals (lack of ability to engage in goal-directed activities during negative emotions), and Impulse (lack of ability to manage one's impulses during negative emotions) (Gratz & Romer, 2004 as cited in Victor & Klonsky, 2016, pp. 1004-1005). Each of the six factors is composed of three statements. The descriptive statistics for this scale are presented in Table 24. All the scales, except for Impulse and Strategies, were normally distributed.

**TABLE 24: DIFFICULTY IN EMOTIONAL REGULATION SCALE DESCRIPTIVES (N = 75)**

| | Min-Max | Average (SD) | Correlation with PGSI |
|---|---|---|---|
| Awareness | 3-13 | 7.9 (3.1) | -.033 |
| Clarity | 3-13 | 5.6 (2.5) | .173 |
| Nonacceptance | 3-15 | 8.3 (3.3) | .304** |
| Strategies | 3-13 | 5.3 (2.9) | .320** |
| Goals | 3-15 | 6.5 (3.1) | .277* |
| Impulse | 3-14 | 5.3 (2.7) | .342** |
| DERS-18 Total | 23-72 | 39.0 (12.3) | .331** |
| *\* p < .05, \*\* p < .01* | | | |

---

[27] $r$ (67) = .387, p < .001

While Awareness and Clarity were not significantly correlated with the PGSI, the remaining subscales and total score were all moderately and positively correlated with the PGSI suggesting that emotional dysregulation in the forms of being nonaccepting of one's emotions, being unable to effectively manage emotions, being unable to engage in goal-directed activities while experiencing negative emotions, and being unable to manage one's impulses while experiencing negative emotions were all related to having higher problem gambling scores.

## PERSONALITY TRAITS

The next set of measures examined the personality traits of the sample. The 50-item International Personality Item Pool (IPPI) was used to measure the Big 5 personality structures. This scale contains 50 statements that factor into the Big 5 personality structures of Extraversion, Agreeableness, Conscientiousness, Emotional Stability, and Intellect/Imagination (Goldberg, 1992). Participants exhibited the highest average scores on Agreeableness, and the lowest average scores on Emotional Stability (see Table 25). PGSI total scores were not statistically significantly associated with any of the Big 5 scales, as measured by the IPPI, except for Emotional Stability where there was a negative association.

**TABLE 25: BIG 5 DESCRIPTIVES AND CORRELATION WITH PGSI (N = 73)**

|  | Min-Max | Average (SD) | Correlation with PGSI |
|---|---|---|---|
| Extraversion | 12-50 | 31.18 (9.22) | -.063 |
| Agreeableness | 24-50 | 40.83 (6.32) | .011 |
| Conscientiousness | 21-50 | 36.51 (7.58) | -.195 |
| Emotional Stability | 12-49 | 30.08 (7.94) | -.284* |
| Intellect/Imagination | 18-47 | 35.65 (6.23) | .142 |
| *p < .05* | | | |

### Self-Control and Impulsivity

Tangney et al.'s (2004) Brief Self-Control Scale (BSCS) consists of 13 statements on a five-point Likert scale measuring degrees of self-control along a scale anchored by 'not at all like me' and 'very much like me'. Nine of the items are phrased such that a high-score indicates low levels of self-control while the other four items are phrased such that a high-score indicates high levels of self-control. The negatively phrased items are recoded so that once the self-control total score is computed, a higher score would represent higher levels of self-control. The means provided in Table 26 demonstrate the original average scores to each statement prior to recoding. The largest mean score was for the statement 'I wish I had more self-discipline' ($X$ = 3.6), which indicated that participants were midway between feeling that this was 'mostly' or 'very like' them. Participants also ranked the statement 'I have a hard time breaking habits' ($X$ = 3.4) as 'mostly' like them. Both statements indicated lower levels of self-control. Conversely, the next two statements that were ranked as 'mostly' like them were indicative of higher levels of self-control. These statements were 'I am able to work effectively towards long term goals' ($X$ = 3.3) and 'I refuse things that are bad for me' ($X$ = 3.2).

**TABLE 26: BRIEF SELF CONTROL SCALE DESCRIPTIVES (N = 75)**

| | Average (SD) |
|---|---|
| I am good at resisting temptation | 2.6 (1.2) |
| I have a hard time breaking habits* | 3.4 (1.3) |
| I am lazy* | 2.3 (1.3) |
| I say inappropriate things* | 2.2 (1.3) |
| I do certain things that are bad for me, if they are fun* | 2.5 (1.2) |
| I refuse things that are bad for me | 3.2 (1.3) |
| I wish I had more self-discipline* | 3.6 (1.4) |
| People would say that I have iron (very strong) self-discipline | 2.4 (1.2) |
| Pleasure and fun sometimes keep me from getting work done* | 2.6 (1.4) |
| I have trouble concentrating* | 2.7 (1.3) |
| I am able to work effectively towards long term goals | 3.3 (1.1) |
| Sometimes I can't stop myself from doing something, even if I know it's wrong* | 2.7 (1.2) |
| I often act without thinking through all the alternatives* | 2.4 (1.3) |
| *\* Statements to be reverse scaled – means show the original version prior to recoding* | |

The appropriate statements, as indicated in Table 26, were recoded and the total score computed. Given the nature of the reverse scaled data, a higher total score would be more indicative of self-control whereas a lower score would indicate more of a lack of self-control. Participants' scores ranged from 22 to 63 with an average of 41.1 (SD = 8.5). As a comparison, in Tangney et al.'s (2004) validation studies of the BSCS, the scores were an average of 39.5. In other words, the subsample of VSE program participants had slightly higher levels of self-control than the samples of undergraduate students the tool was validated on. There was a statistically significant negative correlation between the BSCS scores and the PGSI indicating that higher levels of self-control were associated with lower levels of disordered gambling.[28]

The Barratt Impulsiveness Scale (BIS-11) consists of 30 statements measured on a four-point Likert scale anchored by 'rarely/never' and 'almost always/always'. Scores can be computed for the total sum, as well as for three first order factors (Attentional, Motor, and Non-Planning) or for six second order factors (Attentional is split into Attention and Cognitive Instability; Motor is divided into Motor and Perseverance, while Nonplanning is divided into Self-Control and Cognitive Complexity). Table 27 presents the scores on the various BIS factors. As each of the First and Second Order factors include a varying number of statements, the scores cannot be directly compared to each other. However, to provide some context regarding the total score, Flack and Buckby (2020) used the BIS-11 and PGSI to explore the relationship between disordered gambling and impulsivity with adult gamblers in Australia. While their sample was similar ethnically to the current study (78.9 per cent were Caucasian), the PGSI groups revealed a much larger percentage of no-risk gamblers (66.0 per cent) and a much lower percentage of problem gamblers (6.3 per cent). Still, the results provided some interesting comparisons for the current study. The total BIS-11 score in Flack and Buckby's (2020) was 60.4 (SD = 9.1) whereas among the current subsample of VSE clients, the

---

[28] $r$ (67) = -.296, p = .014

average total score was 65.4 (SD = 11.5), reflecting a higher level of impulsivity. In other words, while the current sample showed slightly higher levels of self-control than the original sample, they showed higher levels of impulsivity than in a comparative study with adult gamblers.

**TABLE 27: BARRATT IMPULSIVENESS SCALE-11 DESCRIPTIVES**

| N = 67-74 | Min-Max | Average (SD) | Correlation with PGSI |
|---|---|---|---|
| BIS Total | 45-91 | 65.4 (11.5) | .272* |
| FIRST ORDER | | | |
| Attentional (8 items) | 9-28 | 15.9 (4.0) | .191 |
| Motor (11 items) | 14-35 | 23.1 (4.7) | .261* |
| Non-Planning (11 items) | 16-36 | 26.1 (4.9) | .249* |
| SECOND ORDER | | | |
| Attention (5 items) | 5-19 | 10.2 (2.8) | .060 |
| Cognitive Instability (3 items) | 3-10 | 5.7 (2.0) | .290* |
| Motor (7 items) | 7-27 | 15.7 (4.3) | .219 |
| Perseverance (4 items) | 4-10 | 7.2 (1.6) | .235 |
| Self-Control (6 items) | 7-21 | 13.2 (3.7) | .205 |
| Cognitive Complexity (5 items) | 7-18 | 12.9 (2.3) | .237* |
| *p < .05 | | | |

Flack and Buckby's (2020) research also concluded that the BIS-11 was moderately correlated with the PGSI ($r = .29$, p < .05). Similarly, in the current study, the PGSI total scores were positively and moderately correlated with the BIS total scores ($r = .27$, p < 05). At the first order level, they were positively and moderately correlated with both the Motor and Non-Planning factors, but not with the Attentional factor. While the Attentional factor was not significantly correlated with PGSI scores, once divided into the two second order factors (subscales), a significant correlation was observed between total PGSI scores and the Cognitive Instability subscale. This subscale consists of statements such as having 'racing' thoughts, having extraneous thoughts, and changing hobbies. The only other significant correlation at the subscale level was with Cognitive Complexity, which is measured by statements, such as 'I save regularly' (reversed), enjoying thinking about complex problems (reversed), getting bored easily when solving thought problems, and being more interested in the present than in the future. Together, these results may suggest that the current sample saw gambling activities as a way to distract themselves from their thoughts, Surprisingly, the PGSI was not correlated with any of the other measures of impulsivity; however, rather than forcing the suggested factor structure, several other studies (Reid et al., 2014; Tsatali et al., 2021) have applied factor analysis and identified other factor structures in their data, so it is possible that the forced structures used in the current analysis do not align well with gambling disorder.

## GAMBLING MEASURES

Several gambling measures were included on the psychometric measure to assess gambling cognitions, motivations, and consequences.

*Inventory of Gambling Situations*

Participants completed the 63-item Inventory of Gambling Situations (Littman-Sharp, Turner, & Toneatto, 2009) designed to identify situations when a person may gamble excessively. Understanding the context under which problem gamblers may engage in excessive gambling may be relevant to gaming employees in detecting when a gambler may be losing control over their gaming, as well as understanding how the VSE program may or may not address various motivations that can lead to problem gambling. Identifying problematic areas may also help problem gamblers identify areas where counselling may be beneficial. Importantly, IGS scores themselves are not used to screen for problem gambling status or gambling disorder. Instead, they are used to identify possible triggers for excessive gambling that can subsequently be self-monitored by those experiencing a slide back into gambling. The IGS is focused on the past 12 months, and each of the 63 items is measured on a four-point scale anchored by 'never' and 'almost always'.

The 63 IGS items have been intentionally organized into 10 subscales (see Table 28). Two additional items "When I was able to gamble without anyone knowing" and "When I wanted to prove to others that I was worthy of respect" are not part of the factor model but are used to provide insights into possible areas for treatment. The 10 subscales can also be grouped into four main clusters: negative affect situations (negative emotions and conflict with others), positive affect situations (pleasant emotions, social pressure); temptation situations (urges and temptations, testing personal control), and gambling cycle situations (need for excitement, worried about debts, winning and chasing, confidence, and skill).

**TABLE 28: IGS SUBSCALES**

| | # Items | Sample Item – I gambled heavily… |
|---|---|---|
| Negative Emotions | 10 | When I was depressed |
| Conflict with Others | 7 | When I had an argument with a friend |
| Urges and Temptations | 9 | When I suddenly had an urge to gamble |
| Testing Personal Control | 7 | When I started to believe that gambling was no longer a problem for me |
| Pleasant Emotions | 5 | When I felt content with my life |
| Social Pressure | 7 | When people around me expected me to gamble |
| Need for Excitement | 6 | When I was looking for excitement |
| Worried about Debts | 5 | When people were pressuring me to come up with money |
| Winning and Chasing | 6 | When I almost won and felt that I would win very soon |
| Confidence in Skill | 5 | When I knew it was a "sure" thing |

The scores are converted into a continuum from 0 to 100. Scores between 0 and 25 are considered low, 26 to 60 are moderate, above 60 is high, while above 70 is very high. The average scores observed in the sample are presented in Table 29. The largest averages were observed for Winning and Chasing (54.5), Urges and Temptations (53.0), and Need for Excitement (52.0). When examining the percentage of participants scoring 60 or above, nearly half of the participants scores 60 or higher on gambling excessively when in need of excitement, while a slightly lower percentage gambled excessively when winning or chasing. Overall, when comparing the 10 broad areas where

a gambler might find themselves gambling excessively, these results suggested that the main motivations for excessive gambling were due to boredom, a need for excitement, or a desire for activities that give an adrenaline rush, followed by gambling to win or chase losses. Comparatively, very few participants gambled excessively due to social pressure (24.1), because they were worried about debts (18.0), or to cope with conflict with others (22.9). It was also interesting to observe that only around one-quarter of participants gambled excessively when they were overconfident in their skills (40.2), which may indicate that, for the most part, the problem gamblers in this sample were not endorsing mistaken beliefs about odds or the likelihood of winning.

**TABLE 29: IGS SUBSCALE SCORES**

| | Range | Average (Standard Deviation) | % Scores > 60 |
|---|---|---|---|
| Need for Excitement | 0-100 | 52.0 (23.8) | 45.2% |
| Winning and Chasing | 0-100 | 54.5 (26.0) | 41.3% |
| Urges and Temptations | 0-100 | 53.0 (23.0) | 37.3% |
| Pleasant Emotions | 0-100 | 45.4 (22.5) | 32.4% |
| Negative Emotions | 0-87 | 42.1 (25.2) | 30.1% |
| Confidence in Skill | 0-100 | 40.2 (27.0) | 26.7% |
| Testing Personal Control | 0-100 | 32.7 (23.2) | 10.8% |
| Conflict with Others | 0-81 | 22.9 (19.9) | 4.2% |
| Worried about Debts | 0-80 | 18.0 (17.9) | 4.0% |
| Social Pressure | 0-81 | 24.1 (17.5) | 2.7% |

PGSI total scores were statistically significantly positively correlated with all the IGS subscales, ranging from a correlation of .331 with Social Pressure to .673 with Winning. In other words, the relationships were all strong and positive indicating that higher problem gambling scores were associated with gambling excessively in all the possible situations presented on the Inventory of Gambling Situations.

### *Gamblers' Beliefs Questionnaire*

The Gamblers' Beliefs Questionnaire (GBQ; Steenbergh et al., 2002) is a 20 item[29] measure that has been empirically separated into two factors measuring cognitive distortions concerning gambling. Addressing cognitive distortions about gambling is important for the treatment of disordered gambling (Winfree et al., 2015). In the current study, the GBQ was included to explore its relationship with disordered gambling and to assess whether gambler's cognitive beliefs about gambling were a factor in their success in the program. Factor 1 is named *Luck/Perseverance* (12 items) and Factor 2 is *Illusion of Control* (8 items). Examples of items on Luck/Perseverance include "If I am gambling and losing, I should continue because I don't want to miss a win" and "If I continue

---

[29] While Steenbergh et al. (2002) initially validated a 21-item measure, two items were removed, and one was added in Winfree et al.'s (2013) validation study. The 20-item was further validated by Winfree et al. (2015) and Philander et al. (2019) and was used in the current study.

to gamble, it will eventually pay off and I will make money". Examples of items on Illusion of Control include "My choices or actions affect the game on which I am betting" and "I should keep track of previous winning bets so that I can figure out how I should bet in the future". Each statement is measured on a 7-point scale anchored by 'very strongly agree' and 'very strongly disagree' and is reverse scaled prior to analysis such that higher scores represent more cognitive distortions (Philander et al., 2019). The 20 GBQ statements were reverse scaled and computed into total and factor scores. The minimum, maximum, and average total and factor scores are provided in Table 30. The averages suggested that participants, on average, either felt 'neutral' or 'mildly agreed' with the various statements. By way of comparison, Winfree et al.'s (2015) study identified an average GBQ score of 67.5 (SD = 19.9), so the current sample of disordered gamblers had slightly fewer cognitive distortions about gambling than found in a sample of treatment-seeking gamblers. However, the scores in the current study were higher than Steenbergh et al.'s (2002) original study of the GBQ in a community and university sample, where the average on the original 21-item scale was 54.6 (SD = 22.2). It appears that the higher scores in the current sample compared to Steenbergh et al.'s (2002) community/university sample were driven primarily by the Luck/Perseverance factor, as the average on the original 13-item Luck/Perseverance factor was 30.2 (SD = 14.0) whereas, in the current study, with one fewer item the average was higher by eight points ($X$ = 37.8). The average on the eight-item Illusion of Control factor was 24.4 (SD = 10.0) compared to 26.3 in the current sample.

**TABLE 30: GAMBLERS' BELIEF QUESTIONNAIRE TOTAL AND FACTOR SCORES**

| | Range | Average (Standard Deviation) |
|---|---|---|
| Total GBQ | 24 – 116 | 63.8 (21.8) |
| Factor 1 Luck/Perseverance (12 items) | 12 -74 | 37.8 (13.7) |
| Factor 2 Illusion of Control (8 items) | 8 - 49 | 26.3 (10.5) |

Winfree et al. (2015) correlated the GPB total score with the South Oaks Gambling Screen and found a moderate positive statistically significant association ($r$ = .21, p < .01). Likewise, both the GBQ total score ($r$ = .276, p = .022) and both factor scores (Luck/Perseverance $r$ = .265, p = .027; Illusion of Control $r$ = .251, p = .036) were all moderately positively correlated with the PGSI total scores, indicating that higher levels of cognitive distortions were associated with higher levels of disordered gambling.

### *Financially Focused Scale*

As explained by Tabri et al. (2018), individuals who are financially focused define their self-concept and self-worth based on financial success and may be at-risk of developing a gambling disorder. Tabri et al. (2018) concluded that those who have a financially focused self-concept have also been shown to be impulsive, dissatisfied with their financial status, believe they are unable to cope with adversity, and have cognitive distortions about gambling. Their validation study of the 20-item Financially Focused Scale (FFS) found that this instrument contributed towards explaining variance in the severity of disordered gambling as assessed by the PGSI (Tabri et al., 2017). Tabri et al.

(2017) concluded that "...gamblers whose self-concept was more financially focused had more severe gambling problems through an increased motivation of gambling for monetary gain" (p. 43). Each FFS statement is ranked from 0 (not at all) to 4 (extremely). Tabri et al. (2017) advised that the FFS items should be treated as a single factor. The total score was, therefore, computed for the current sample. A short form of the FFS using one statement from each of the four categories shown in Table 31 was also validated by Tabri et al. (2017). These four statements are identified below in the table by the superscript.

The scores on the FFS ranged from 0 to 80; the average was 31.3. Considering that a 0 indicated 'not at all' and a 4 indicated 'extremely', the mean score indicated that the current sample tended to fall between agreeing 'a little bit' and 'more or less' about being financially focused. The short form FFS scores ranged from 0 to 16 with an average of 5.7 (SD = 3.3). As a comparison, Tabri et al.'s (2018) sample of primarily non-problem gamblers from British Columbia had an average score of 1.73 (SD = 0.6) on the short form FFS suggesting that the current sample of disordered gamblers had a more financially focused self-concept than a non-disordered gambling population would. The individual item scores are provided in Table 31. The largest mean scores were feeling that 'I would enjoy life more if I had more money' followed by feeling that 'My life will be more exciting or rewarding if I had money'. Conversely, the items with the lowest mean scores were 'The amount of influence I have on other people depends on the amount of money I have' and 'People will think less of me if I don't have a lot of money'. These general patterns seem to suggest that participants were potentially more driven by a feeling that having money would make life easier, whereas they were less likely to define their self-concept based on financial wealth.

**TABLE 31: FINANCIALLY FOCUSED SCALE DESCRIPTIVES (N = 74)**

| | Mean (SD) |
|---|---|
| *Self-views* | |
| My value as a person depends upon the amount of money I have | .92 (1.18) |
| How I feel about myself is largely based on the amount of money I have* | 1.18 (1.16) |
| I would think more highly of myself if I had more money | 1.66 (1.37) |
| Money is a large part of who I am | 1.19 (1.26) |
| It is difficult to feel good about myself when I do not have a lot of money | 1.72 (1.44) |
| *Feelings* | - |
| My ability to feel happy depends on the amount of money I have | 1.39 (1.24) |
| Making money is one of the few activities that makes me feel good or like I am accomplishing something | 2.09 (1.40) |
| My life will be more exciting or rewarding if I had more money | 2.69 (1.17) |
| My moods are influenced by the amount of money I have* | 1.74 (1.29) |
| I would enjoy life more if I had more money | 2.79 (1.19) |
| *Impersonal* | - |
| The opinion others have of me is based on the amount of money I have | 0.89 (1.13) |
| The amount of influence I have on other people depends on the amount of money I have | 0.70 (1.03) |
| People will think less of me if I don't have a lot of money* | 0.76 (0.98) |
| People would be more interested in me if I had more money | 1.19 (1.21) |
| My relationships would improve if I had more money | 1.26 ( 1.38) |
| *Achievement* | - |
| The amount of success I have in my (future) job or career depends largely upon the amount of money I have | 0.98 (1.18) |
| The amount of money that I have influences my ability to do things | 2.39 (1.30) |
| My performance in activities (e.g., school, work, hobbies, etc.) is influenced by the amount of money that I have | 1.84 (1.46) |
| The opportunities that are available to me depend on the amount of money I have* | 1.96 (1.30) |
| My school and work performance or opportunities would improve if I had more money | 1.53 (1.39) |
| * Included on the short form FFS | |

Consistent with Tabri et al.'s research (Tabri et al., 2021) where the short form FFS and PGSI were correlated at .33, the total scores on the full FFS and the PGSI were positively and strongly correlated with each other (*r* = .37).[30] However, the short form FFS was not significantly corelated with PGSI scores.[31] Given this, the full form was retained for use in the remaining analyses.

### Financial Stress in Relation to Gambling

The authors of this report designed a nine-item measure of financial stress in relation to gambling measured on a scale of never (0), once or twice (1), once or twice a month (2), once or twice a week (3), or daily (4) over the past 12 months. The most common activities reported by participants in

---

[30] *r* (63) = .366, p = .003

[31] *r* (67) = .191, p > .05

the past 12 months was to borrow money from their credit cards or to draw on their savings or equity. In fact, nearly one-in-ten participants (9.3 per cent) reported borrowing from their credit cards daily. However, more commonly, these activities were engaged in once or twice over the past 12 months (see Table 32). A total score was computed by summing together the nine items. The range of scores was zero through 20. The average score was 5.0 (SD = 3.8) suggesting that participants had experienced financial stress somewhere between 'never' and 'once or twice' because of their gambling. This variable was not normally distributed. There were three extreme scores of 15 or higher on the scale. These three participants were those who endorsed the more severe aspects of financial stress, i.e., filing for bankruptcy, remortgaging their home, or moving to a cheaper home. More commonly, participants reported borrowing from credit cards or drawing on savings or equity. The total scores on financial stress were positively correlated with the PGSI scores and a strong significant relationship was observed, indicating that higher levels of disordered gambling were associated with higher scores on the financial stress from gambling measure.[32] When the three extreme scores were removed, this relationship became even stronger, increasing from $r$ = .45 to $r$ = .53.[33] Given this, the financial stress measure showed a strong positive relationship with problem gambling. However, validation of this scale will be needed in future studies to assess and demonstrate its utility in and relevance to gambling disorder research. Still, the Financial Stress from Gambling total score was strongly positively correlated with the FFS total score, which provides some early support towards its validity.[34]

**TABLE 32: FINANCIAL STRESS FROM GAMBLING DESCRIPTIVES (N = 75)**

|  | % Ever | % Once or Twice |
|---|---|---|
| Borrowed from credit cards | 65.3% | 17.3% |
| Drew on savings or equity | 61.3% | 26.7% |
| Had difficulty paying household bills | 47.3% | 27.0% |
| Borrowed from friends/family | 41.3% | 29.3% |
| Borrowed from other sources | 33.3% | 17.3% |
| Sold something that was emotionally meaningful | 17.3% | 10.7% |
| Filed for bankruptcy | 10.7% | 8.0% |
| Remortgaged home | 5.3% | 2.7% |
| Moved to cheaper home | 4.0% | 4.0% |

## SATISFACTION WITH LIFE

The final concept measured on the psychometric interview was Diener et al.'s (1985) Satisfaction with Life Scale. This is a 5-item scale measured along a 7-point continuum anchored by 'strongly disagree' and 'strongly agree'. This instrument reflects how participants view their overall wellbeing. The scores for each statement are provided in Table 33; however, Diener et al. (1985)

---

[32] $r$ (68) = .449, p < .001

[33] $r$ (65) = .533, p < .001

[34] $r$ (66) = .328, p = .006

advised that total scores by used in any analysis. While the total score will be used for analysis, a review of the individual means suggested that participants generally felt that they 'neither agreed nor disagreed' with most of the statements. The statement with the largest mean, which indicated that they were midway between 'neither' and 'slightly agree' was that 'so far, I have gotten the important things I want in life'. Participants also indicated that they 'neither agreed nor disagreed' that they were satisfied with their life, and that the conditions of their life were excellent. They were midway between 'slightly disagreeing' and 'neither agreeing nor disagreeing' for the remaining two items.

**TABLE 33: SATISFACTION WITH LIFE SCORES (N = 75)**

| | Mean (SD) |
|---|---|
| In most ways my life is close to my ideal | 3.85 (1.82) |
| The conditions of my life are excellent | 4.21 (1.78) |
| I am satisfied with my life | 4.36 (1.73) |
| So far I have gotten the important things I want in life | 4.68 (1.82) |
| If I could live my life over, I would change almost nothing | 3.61 (2.07) |
| Total Score | 20.73 (7.08) |

Recommended cut-off scores are used to divide the total score into seven categories of satisfaction. The average total score of 20.7 indicated that participants were neutral, leaning towards being slightly satisfied with their life. Figure 10 provides the percentage of participants falling into each of the seven categories of life satisfaction.

**FIGURE 10: DISTRIBUTION OF SCORES ON PARTICIPANTS' SATISFACTION WITH THEIR LIFE (N = 75)**
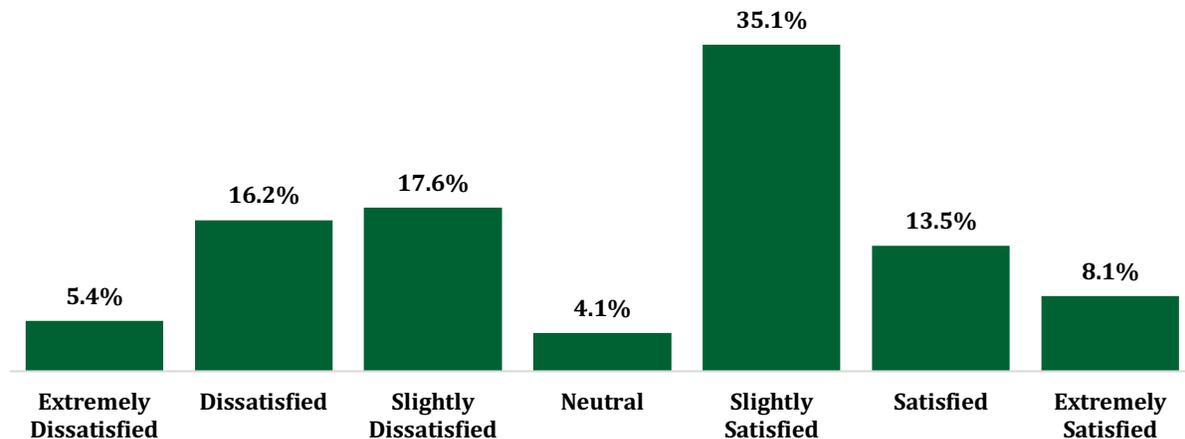
The total Satisfaction with Life score was correlated with the PGSI, and a statistically significant strong negative relationship was found.[35] As quality of life was a key area of interest for BCLC, several additional analyses were conducted to further explore participants' Satisfaction with Life rankings. These results are presented in Table 34. To summarize, Satisfaction with Life was not statistically significantly correlated with the Financial Stress from Gambling scale or the AUDIT C, but was negatively correlated with the PGSI, FFS, DERS18, SPS, GAD, and BDI.

**TABLE 34: BIVARIATE CORRELATIONS BETWEEN SATISFACTION WITH LIFE AND MENTAL HEALTH-RELATED MEASURES**

|  | Bivariate Correlation with Satisfaction with Life |
|---|---|
| PGSI Total Score | -.321** |
| FFS | -.336** |
| Financial Stress from Gambling | -.204 |
| DERS18 | -.296* |
| SPS | -.518*** |
| AUDIT C | .223 |
| GAD | -.315** |
| BDI | -.557*** |
| *\* p < .05, \*\* p < .01, \*\*\* p < .001* | |

An additional analysis was conducted to determine whether and which of the significant scales (PGSI, FFS, DERS18, SPS, GAD, and BDI) were able to predict scores on the Life Satisfaction scale. Whereas the table above examined the relationships one at a time between Life Satisfaction scores and each of the relevant scales, a multiple regression analysis enabled these scores to be simultaneously considered together in terms of their influence on the variable of interest. Using a linear multiple regression, the model was statistically significant.[36] Together, these factors were able to explain nearly half (44 per cent; 37.6 per cent if adjusting to control for the number of predictors) of the changes in Satisfaction with Life scores (see Table x). Two scales stood out as individual predictors of Life Satisfaction scores. The Stress Proneness Scale was negatively predictive of scores on the Satisfaction with Life scale (t = -3.30, p = .002, b = -.483) as was the Burns Depression Checklist (t = -3.267, p = .002, b = -.380); the latter of which was the strongest predictor of scores on the Satisfaction with Life instrument. In other words, depression and stress largely appeared to drive Satisfaction with Life scores downwards.

However, other than the PGSI, this model did not test the potential influence of gambling cognitions or reasons for gambling on participants' Satisfaction with Life score. Additional bivariate correlations were subsequently conducted with the Satisfaction with Life scores and the IGS Subscales and GBQ total scores. The results are presented in Table 35. Statistically significant negative correlations were identified between the Satisfaction with Life subscale and three of the

---

[35] $r$ (68) = -.321, p = .007

[36] $R$ (6, 49) = 6.53, p < .001

Inventory of Gambling Situations: gambling to cope with negative emotions, gambling to cope with conflict in relationships or with people close to you, and gambling due to urges. None of the remaining IGS subscales or the Gambling Beliefs Questionnaire were significantly correlated with Satisfaction with Life scores. A linear multiple regression analyzing the effects of the three IGS scales that were related to Life Satisfaction at the bivariate level was conducted and determined to be statistically significant.[37] These three predictors explained approximately 16.4% (12.5 per cent adjusted) of the variance in Life Satisfaction Scores. However, none were statistically significant predictors of Life Satisfaction Scores. In other words, they worked together to explain some of the reasons why Life Satisfaction will vary among disordered gamblers but did not do so when considered independent of each other.

**TABLE 35: BIVARIATE CORRELATIONS BETWEEN SATISFACTION WITH LIFE AND GAMBLING-RELATED MEASURES**

| | Bivariate Correlation with Satisfaction with Life |
|---|---|
| IGS Negative Emotions | -.422*** |
| IGS Conflict | -.330** |
| IGS Urges | -.243* |
| IGS Positive Emotions | -.037 |
| IGS Social | -.090 |
| IGS Excitement | -.186 |
| IGS Debts | -.102 |
| IGS Winning | -.137 |
| IGS Confidence | -.076 |
| GBQ Factor 1 Luck/Perseverance | -.229 |
| GBQ Factor 2 Illusion of Control | -.180 |
| *p < .05, ** p < .01, *** p < .001* | |

### PREDICTING PGSI SCORES AT T1

At the T1 interview, the sample was overwhelmingly composed of gamblers in the high-risk range for gambling disorder. The results discussed thus far have indicated that many of the scales used to measure mental health, personality, and gambling-related cognitions were correlated statistically with PGSI scores. To better understand which of these scales may help to explain the variance in PGSI scores, three independent multiple regression analyses were conducted. The first analysis tested all the statistically significant mental health scales: the Burns Depression Checklist total score, the Generalized Anxiety Disorder total score, suicidal thoughts (0 = No), Stress Proneness Scale, and the DERS-18 Nonacceptance, Strategies, Goals, and Impulse subscales. This analysis was conducted with 64 cases, so caution should be taken when interpreting the findings. These scales did form a statistically significant model that explained 40.1 per cent (31.4 per cent) of the variance in PGSI scores.[38] When examining the ability of each scale to predict scores on the PGSI relative to

---

[37] $R$ (3, 64) = 4.19, p = .009

[38] $R$ (8, 55) = 4.6, p < .001

other scores, the only statistically significant predictor was suicidal ideation.[39] This predictor had a positive relationship with PGSI scores. In other words, those who experienced suicidal ideation in the past year scored approximately four points higher on the PGSI. Of course, while suicidal ideation was used as the predictor of PGSI scores in this analysis, given the nature of the data collection and the fact that both suicidal ideation and problem gambling behaviours were measured over the past 12 months, it is not clear whether suicidal ideation increases problem gambling behaviours (e.g., to cope with these negative emotions) or if suicidal ideation is the consequence of gambling behaviours (e.g., as a result of potential losses experienced while gambling).

The next model examined personality predictors against PGSI scores. In this case, the Big 5 emotional stability factor, the brief self-control scale, and the Barratt Impulsivity Scale were entered into the model. The BIS-11 total score was used rather than the subscale scores to be consistent with prior research. The analysis was conducted with 61 cases and the model was again significant and explained 14.7% (10.2 per cent adjusted) of the variance in PGSI scores.[40] Only the IPPI measure of Emotional Stability emerged as a significant predictor of PGSI scores.[41] Here, lower levels of emotional stability predicted higher scores on the PGSI. Consistent with what was previously concluded, rather than problem gamblers in the current study being driven by issues with self-control or impulsivity, they appeared to be engaging in problem gambling to cope with their emotions.

The third model examined gambling-related factors and their ability to predict scores on the PGSI. This included all factors of the Inventory of Gambling Situations, both Gamblers' Beliefs Questionnaire, the Financially Focused Self-concept total score, and the Financial Stress from Gambling scale. This analysis was run with 58 cases, so it is important to be cautious when interpreting the findings. Together, these scales explained 64.7% (53.2 per cent adjusted) of the variance in problem gambling scores, which was a statistically significant model.[42] Interestingly, only one of these predictors remained significant once the variance for each predictor was controlled for. This was the IGS subscale for Negative Emotions, which was positively predictive of PGSI scores.[43] This finding is consistent with the previous analysis where the main driving factor of problem gambling behaviours in the current study appeared to be an inability to cope with negative emotions.

### T2 COUNSELLING PREDICTIONS USING PSYCHOMETRIC DATA

As will be explained below, only 17 participants (18.1 per cent) had accessed problem gambling counselling or treatment by the T2 interview. To try and understand what factors may be associated with accessing counselling, the psychometric subscale score averages were computed

---

[39] $t$ = 3.00, p = .004, $b$ = 4.76

[40] $R$ (3, 57) = 3.28, p = .027

[41] $t$ = -2.08, p = .042, $b$ = -.19

[42] $R$ (14, 43) = 5.6, p < .001

[43] $t$ = 2.2, p = .03, $b$ = .11

for those who had accessed counselling and compared to those who had not. These are displayed in Table 36. Of note, none of the psychometric scores differed significantly when comparing those who had accessed counselling to those who had not.

**TABLE 36: PSGI SCORES BY WHETHER PARTICIPANT ACCESSED COUNSELLING**

| | No Counselling | Counselling |
|---|---|---|
| IGS Negative Emotions | 14.0 (6.0) | 16.8 (6.4) |
| IGS Conflict with Others | 42.9 (23.6) | 50.9 (26.6) |
| IGS Urges and Temptations | 56.4 (21.6) | 55.3 (26.5) |
| IGS Testing Personal Control | 33.6 (22.4) | 35.6 (28.9) |
| IGS Pleasant Emotions | 47.5 (21.4) | 47.6 (26.0) |
| IGS Social Pressure | 25.2 (17.8) | 20.3 (16.9) |
| IGS Need for Excitement | 54.7 (22.4) | 48.0 (26.1) |
| IGS Worried about Debts | 18.6 (18.3) | 22.7 (15.1) |
| IGS Winning and Chasing | 57.0 (26.7) | 55.9 (28.4) |
| IGS Confidence | 41.3 (29.3) | 36.9 (27.0) |
| GBQ Factor 1 Luck/Perseverance (12 items) | 37.4 (13.0) | 34.5 (14.4) |
| GBQ Factor 2 Illusion of Control (8 items) | 26.6 (11.0) | 23.9 (10.0) |
| Burns Depression Checklist | 14.9 (8.9) | 16.1 (9.4) |
| Generalized Anxiety Disorder | 5.4 (4.5) | 6.1 (3.7) |
| Extraversion | 30.7 (9.9) | 32.0 (8.2) |
| Agreeableness | 40.6 (5.8) | 42.4 (8.0) |
| Conscientiousness | 35.9 (7.7) | 38.5 (7.3) |
| Emotional Stability | 30.2 (7.9) | 30.1 (7.2) |
| Intellect/Imagination | 35.7 (6.4) | 37.1 (6.0) |
| AUDIT C | 3.2 (2.5) | 3.7 (3.0) |
| Financially Focused Self-concept | 30.6 (16.8) | 36.6 (16.4) |
| Financial Stress from Gambling | 5.2 (4.0) | 5.3 (4.0) |
| Brief Self Control Scale | 40.3 (8.7) | 42.3 (7.8) |
| Barratt Impulsivity Scale – 11 | 65.1 (10.9) | 66.2 (14.2) |
| Stress Proneness Scale | 19.3 (7.2) | 19.6 (6.6) |
| DERS18 Awareness | 8.1 (3.0) | 7.8 (3.1) |
| DERS18 Clarity | 5.5 (2.7) | 4.9 (1.7) |
| DERS18 Goals | 7.9 (3.3) | 9.2 (3.4) |
| DERS18 Impulse | 5.1 (2.7) | 5.9 (3.4) |
| DERS18 Nonacceptance | 6.3 (3.2) | 7.4 (3.3) |
| DERS18 Strategies | 5.4 (2.7) | 5.9 (3.3) |
| Life Satisfaction | 20.6 (7.3) | 20.3 (7.6) |
| *p < .05, ** p < .01, *** p < .001* | | |

# Data Analysis T2 Interviews

In general, T2 interviews occurred approximately six months after the participant's T1 interview. Of the 128 participants who completed a T1 interview, 96 VSE clients (75.0 per cent) completed a T2 interview. While 51.6% of the T1 sample identified as female, this proportion increased slightly to 53.2% at the time of the T2 interviews. The mean age of clients was 48.2 years old at the time of the T1 interview and 49.7 years old at the time of the T2 interview. Similarly, there was virtually no change in the region that participants in the T2 identified as the location of their primary residence compared to the T1 interview. As discussed above, at the time of the T1 interview, most participants (60.9 per cent) indicated that their primary residence was in the Lower Mainland of British Columbia. This was followed by the Interior (19.5 per cent), Vancouver Island (14.1 per cent), and the North (5.5 per cent). At the time of the T2 interview, most participants (56.4 per cent) were from the Lower Mainland of British Columbia. This was followed by the Interior (21.3 per cent), Vancouver Island (14.9 per cent), and the North (7.4 per cent).

## PARTICIPANTS WHO WERE NO LONGER IN THE VSE PROGRAM

Of those who had enrolled in the VSE program for six months (n = 35), 25 participants (71.4 per cent) completed the T2 interview. As their enrollment in the VSE program had concluded at the time of their T2 interviews, participants were asked if they had reenrolled in the program. Of these 25 participants, four (16 per cent) had re-enrolled in the VSE program. Of these four participants, one had reenrolled for another six months, one had reenrolled for one year, and two had reenrolled for three years. While the sample was extremely small (n = 4), when asked why they reenrolled, all four participants indicated that the program worked for them previously, while three of the four indicated that they reenrolled because they were concerned that they would start gambling again if they were not in the program, because they were already gambling too often, or because they were gambling and felt that they were losing too much money. Three of the four participants felt that their experiences reenrolling in the program was 'about the same' as the last time they enrolled in the program.

Of the 21 participants who chose to not reenroll in the VSE program after their six-month agreement expired, the most provided reason was that participants felt they had better self-control now (47.6 per cent) and because participants wanted to manage their gambling on their own (38.1 per cent) (see Table 37). Of note, no participants indicated that they had not reenrolled in the program because the VSE program had not worked for them. Participants were also asked if there were any other reasons why they had not reenrolled, and 10 participants provided additional reasons. Among these 10 participants, eight stated that they had not reenrolled because the casinos were closed due to the COVID-19 pandemic.

**TABLE 37: REASONS FOR NOT REENROLLING IN THE VSE PROGRAM (N = 21)**

| | |
|---|---|
| I have better self-control now | 47.6% |
| I wanted to manage my gambling on my own | 38.1% |
| I wanted to be able to gamble again | 28.6% |
| I wanted to attend events in the casino | 28.6% |
| I haven't felt the need to gamble again | 19.0% |
| I don't feel that I needed the program anymore | 19.0% |
| I just didn't think about it or get around to enrolling again | 14.3% |
| I didn't like that I could not withdraw from the program | 14.3% |
| I just forgot that my exclusion period was over | 9.5% |
| The program just didn't work for me | 0 |

In total, 10 participants (47.6 per cent) stated that they had started gambling again in a gaming facility since the end of their exclusion period. As mentioned above, nearly half of those who did not reenroll in the VSE program stated that they had better self-control now than in the past, of those who had returned to gambling (n = 10), only two stated that they felt they were 'not at all in control over their gambling'. One participant stated that all the money they saved while they were excluded had been spent gambling and the other reported that they went to the casino every chance they got with whatever amount of money they had at the time.

When asked if the participants felt that they might sign up for the VSE program again, only two participants (9.5 per cent) said that they would not. While one-third of participants indicated that they did not know if they would sign up again, 19% indicated that they would within the next six months, while one-third indicated that they would within the next year. One participant stated that they would re-enrol once the gaming facilities reopened.

### EXPERIENCES OF THE ENTIRE T2 SAMPLE OVER THE PREVIOUS SIX MONTHS

Among the entire T2 sample (n = 96), contrary to what is supposed to happen, 10.4% (n = 10) of participants indicated that they had received some communication from BCLC, such as advertising or information promoting gambling products, while enrolled in the VSE program. Participants were asked about changes to some common activities that they may have engaged in while enrolled in the VSE program. The number of participants after each statement reflected the number of those who indicated that they had engaged in that type of activity at some point prior to their exclusion and during their last enrollment period (see Table 38). Most participants who had engaged in any of the activities listed in Table 18 before and during their enrollment in the VSE program indicated that there was no change in how often they engaged in these activities. Importantly, for the intentions and goals of the VSE program, while only engaged in by 16 participants, 62.5% of those who had gambled on PlayNow.com before their most recent enrollment in the VSE program indicated that their use of PlayNow.com decreased over the past six months. Moreover, all these participants indicated that their gambling on PlayNow.com decreased 'a lot'. Of those who reported no change in their gambling on PlayNow.com, none of these participants at the Time 1 interview had actually reported gambling on PlayNow.com in the previous year, so 'no change' reflected that

they continued to not gamble on PlayNow.com while excluded. It was also somewhat alarming to see that the use of some harmful activities reportedly increased during the exclusion period. It is possible that these increases were associated with changes in behaviour because of the COVID-19 pandemic; however, the small sample sizes precluded additional exploration of these trends.

**TABLE 38: ACTIVITIES DURING ENROLLMENT IN THE VSE PROGRAM**

| | Decreased | No Change | Increased |
|---|---|---|---|
| Drinking Alcohol (n = 67) | 19.4% | 76.1% | 4.5% |
| Smoking Cigarettes (n = 42) | 26.2% | 54.8% | 19.0% |
| Using Marijuana (n = 29) | 17.2% | 62.1% | 20.6% |
| Using Illicit Drugs (n = 8) | 0 | 75.0% | 25.0% |
| Gambling on PlayNow.com (n = 16) | 62.5% | 37.5% | 0 |
| Internet Gambling (n = 25) | 48.0% | 28.0% | 24.0% |
| Other Internet Use (n = 88) | 6.8% | 61.4% | 31.9% |

Another important finding was that only 14.6% of the sample (n = 14) regretted enrolling in the VSE program at any point since enrolling. Of those who did indicate that they regretted their decision to enroll in the program, this most commonly occurred within the first three months of enrolling (57.1 per cent). In fact, only one participant indicated that they regretted their decision immediately after enrolling, 21.4% indicated that they had some regret within the first month of enrolling, while 14.3% had some regret within the first six months. However, at the time of the T2 interview, none of the participants still regretted signing up for the VSE program. In other words, while some participants regretted enrolling in the program at some point, this regret was not common among the sample and was reduced the longer one was in the program.

In terms of the root of the regret, as demonstrated in Table 39, slightly more than three-quarters of this sub-sample (78.6 per cent) indicated that they wanted to return to gambling, while half indicated that they missed the social aspect of gambling, such as having dinner or drinks at a casino. A small number of participants indicated that their regret was because they felt forced to enroll in the VSE program (21.4 per cent) and 14.3% believed that their decision to enroll in the program was impulsive and that they did not think about their decision enough before enrolling.

**TABLE 39: REASONS FOR REGRETTING ENROLLING IN THE VSE PROGRAM (N = 14)**

| | |
|---|---|
| I wanted to return to gambling | 78.6% |
| I missed the social aspect of gambling | 50.0% |
| I felt as though I did not actually need to be excluded, I just needed a short break | 42.9% |
| The program was not helping me stop gambling | 28.6% |
| I felt as though I was forced to enroll in the program by someone | 21.4% |
| It was an impulsive decision; I did not think about it enough beforehand | 14.3% |

Like above, participants were asked specifically about their gambling behaviours while they had been enrolled in the VSE program. Again, the number of participants after each statement reflected the proportion of participants who indicated that they had engaged in that type of activity at some point in the past and during their enrollment period (see Table 40). In addition to these answer options, participants could also choose 'never played before'. In line with the purpose and procedures of the VSE program, except for lotto and scratch and wins, most participants who gambled in any of the ways listed in Table 20 indicated that their gambling had decreased over the past six months. Moreover, for all forms of gambling, when a participant indicated that their gambling activity had decreased, the option selected was 'decreased a lot or stopped entirely' rather than 'decreased a little'. For example, of those who indicated that their playing of slot machines had decreased (n = 66), 85.9% stated that their gambling with slot machines decreased a lot or stopped entirely. One area to note is that more than one-quarter of participants (27.8 per cent) who bet on sports outcomes indicated that this behaviour had increased while enrolled in the VSE program, which might represent a replacement behaviour. In other words, because participants were not able to gamble in a gaming facility or on PlayNow.com, perhaps they replaced this urge with betting on sports. While only 18 participants indicated that they had bet on sports outcomes, which is a very small sample, it is important to note that the number of participants who indicated that their sports betting had increased was five participants; four of which indicated that their betting on sports outcomes increased 'a little'.

**TABLE 40: GAMBLING ACTIVITIES DURING ENROLLMENT IN THE VSE PROGRAM**

| | Decreased | No Change | Increased |
|---|---|---|---|
| Slot Machines (n = 71) | 93.0% | 4.2% | 2.8% |
| Table Games (n = 40) | 90.0% | 7.5% | 2.5% |
| Video Poker (n = 23) | 95.7% | 4.3% | 0 |
| Betting on Sports Outcomes (n = 18) | 61.1% | 11.1% | 27.8% |
| Betting on Horse Races (n = 17) | 58.8% | 35.3% | 5.9% |
| Keno (n = 37) | 67.6% | 21.6% | 10.8% |
| Bingo (n = 19) | 57.9% | 36.8% | 5.3% |
| Lotto/Scratch and Wins (n = 80) | 45.0% | 36.3% | 18.7% |
| Online Gambling for Fun or Money (n = 41) | 53.7% | 19.5% | 26.8% |

In terms of the location where gambling occurred while enrolled in the VSE program, 8.3% reported doing so in a casino, 2.1% in a bingo hall, and 10.4% in a house game. Of note, 17.7% of the T2 sample (n = 17) indicated that they played Keno. The frequency of playing Keno was once (35.3 per cent), a few times (35.3 per cent), once per week (23.5 per cent), and a few times per week (5.9 per cent). As expected, lotto or scratch and wins were the most common form of gambling that participants engaged in while enrolled in the VSE program (68.8 per cent). With respect to this form of gambling (n = 66), 83.4% of participants reported gambling on lotto or scratch and wins a few times (47.0 per cent) or once per week (36.4 per cent). Only one participant indicated that they played lotto or scratch and wins daily, and five participants (7.6 per cent) reported doing so only once since enrolled in the VSE program.

In terms of online gambling, 27 participants (28.1 per cent) reported that they had gambled either for money or for fun online while enrolled in the VSE program. As demonstrated in Table 41, the most common internet website that participants gambled online was PokerStars (18.5 per cent) followed by Bet365 (7.4 per cent) and Party Casino (7.4 per cent). Of note, seven participants (7.4 per cent) indicated that they attempted to gamble on BCLC's PlayNow.com website while enrolled in the VSE program. Of these seven participants, three clients indicated that they were able to gamble on the site by using someone else's account, while three indicated that they had attempted to get on to the site but were unable to do so.

**TABLE 41: INTERNET SITES THAT PARTICIPANTS PLAYED AT WHILE ENROLLED IN THE VSE PROGRAM (N = 27)**

| | |
|---|---|
| PokerStars | 18.5% |
| Bet365 | 7.4% |
| Party Casino | 7.4% |
| Bodog | 3.7% |
| Full Tilt Poker | 3.7% |
| PartyPoker / Bwin | 3.7% |
| Draft Kings | 0 |
| William Hill | 0 |

## VIOLATING THE VSE AGREEMENT

Given the information provided above, in total, 11 participants (11.5 per cent) who completed both a Time 1 and Time 2 interview reported that they had tried to re-enter a gaming facility in the past six months while excluded. Most of these participants (63.6 per cent) only tried to do so once or twice. Three participants reported trying to re-enter a gaming facility once per month and one participant indicated that they attempted to do so a few times per month. The mean number of times that participants attempted to re-enter a gaming facility in British Columbia while excluded, regardless of whether they were successful in doing so, was 3.9 times (SD = 4.1 times) with a range of one time to 15 times. It was interesting to note that 45.5% of those who tried to re-enter a gaming facility (n = 5) did so 'more recently' whereas another 27.3% (n = 3) indicated that they had done so mostly at the beginning of their exclusion period.

The most common methods that participants used to try to reduce the chances of being identified as an excluded player were to not bring any identification with them (36.4 per cent), going to a different facility than they usually gambled at (27.3 per cent), and having someone else drive them to the gaming facility or use public transportation (27.3 per cent). Of note, 63.6% of participants did not do anything differently to reduce the chances of being detected. It is important to keep in mind that this information is based on just 11 participants so extreme caution must be used when considering this information.

Still, six participants (54.5 per cent) indicated that they were always able to enter a gaming facility in British Columbia while excluded without being detected. Only one participant indicated that they were never able to enter a gaming facility undetected. However, this participant only attempted to re-enter a gaming facility once while excluded and did nothing to reduce the chances of being

detected. In terms of the consequences that participants faced when caught trying to re-enter a gaming facility while excluded, only three participants indicated that they were caught. One participant indicated that their winnings were withheld, they were reprimanded or scolded, and they were reminded that they were not eligible for payouts if they won a jackpot. Another participant indicated that they were escorted off the premises by security, were reminded about their exclusion agreement by security or a GameSense Advisor, and were reminded about or referred to problem gambling counselling. The third participant was reminded about their exclusion agreement, a GSA spoke to them about the importance of not breaching their agreement, and they were escorted off the premises by security. Again, while the sample was extremely small, none of the participants indicated that they were given a fine or charged with trespassing. Some of the most common reasons for deciding to violate one's agreement and trying to re-enter a gaming facility while excluded were thinking they would not get caught by security, being bored, not being able to resist the urge to gamble, the excitement involved with gambling, believing that winning provided a sense of achievement, and to relieve stress.

Of note, as mentioned above, most participants did not attempt to violate their VSE agreement. As demonstrated in Table 42, the most common reasons why people did not violate their VSE agreement had to do directly with gambling. Nearly all participants stated that they did not violate their VSE agreements because of a determination to stay abstinent from gambling (94.1 per cent) and a determination to keep a promise to themselves to not gamble (92.9 per cent). A smaller proportion reported not violating their VSE agreement because they were worried about losing money (68.2 per cent). A majority or near majority did not violate their VSE agreement because of things that BCLC put in place to prevent re-entry. For example, 65.5% reported being deterred by knowing that they would not be paid out for any jackpots they might win while excluded, 55.3% stated that they did not violate their VSE agreement because they were worried about being caught by security, and a slight minority (47.1 per cent) were worried about the consequence of getting caught. It would also appear that, to some degree, internal factors played a role in not violating their VSE agreement. For example, slightly more than half of participants (56.5 per cent) indicated that they worried about being embarrassed if they were caught by security and a similar proportion (56.0 per cent) were worried about losing their self-control if they entered a gaming facility.

**TABLE 42: REASONS FOR NOT RETURING TO A GAMING FACILITY IN BC WHILE EXCLUDED (N = 85)**

|  | Disagree | Agree |
|---|---|---|
| I was worried about getting caught by security | 44.7% | 55.3% |
| I was worried about the consequences if I was caught | 52.9% | 47.1% |
| I was worried about embarrassing myself if I was caught | 43.5% | 56.5% |
| I was worried about losing my self-control | 44.0% | 56.0% |
| I was worried about losing money | 31.8% | 68.2% |
| I was determined to stay abstinent from gambling | 5.9% | 94.1% |
| I was determined to keep my promise to myself that I would not gamble | 7.1% | 92.9% |
| I was determined to keep my promise to someone else that I would not gamble | 42.4% | 57.6% |
| I knew I would not be paid out for any jackpots I won while excluded | 34.5% | 65.5% |
| I never felt the urge to gamble | 56.5% | 43.5% |

In terms of strategies that participants may have tried to avoid returning to a gaming facility while excluded, the most common ones were thinking about what they could do with their money instead of gambling (80.0 per cent), doing a physical activity instead of gambling (54.7 per cent), and telling themselves that they would be caught if they tried to re-enter a gaming facility while excluded (52.1 per cent) (see Table 43). Very few participants indicated that they notified a gaming facility when they were struggling to ensure that they would be prevented from entering (2.1 per cent) or reaching out to a Gambler's Anonymous sponsor (5.3 per cent). In terms of other strategies participants used to avoid gambling, some spoke of relying on family and friends for support, watching TV, playing video games, or reading, thinking about other things, and staying at home. Of note, 10.4% of the sample (n = 10) reported that they had experienced pressure from family/friends to go to a gaming facility while they were excluded. Seven of these participants indicated that the people who had put pressure on them to go to a gaming facility knew they were excluded. The main ways that these participants responded to this pressure was to reiterate to those people that they were excluded, or they found a way to change the plans to not include going to a gaming facility, or they avoided the outing entirely. However, one participant did express that they ended up going to a casino with friends, which led to more visits to gaming facilities.

**TABLE 43: STRATEGIES USED TO NOT VIOLATE ONE'S VSE PROGRAM AGREEMENT (N = 96)**

| | |
|---|---|
| Think about what I can do instead with the money I'm not spending on gambling | 80.0% |
| Do a physical activity instead | 54.7% |
| Telling myself I will get caught if I try to return while excluded | 52.1% |
| Speak to a loved one or friend when I feel the urge to gamble | 41.1% |
| Intentionally avoid driving by or being near a gaming facility | 20.4% |
| Reach out to a counsellor | 14.9% |
| Leave most of my money at home when I go out | 13.7% |
| Make my money or credit inaccessible | 12.6% |
| Reach out to a Gambler's Anonymous sponsor | 5.3% |
| Putting the gaming facility on high alert when I am struggling | 2.1% |

## COUNSELLING AND SUPPORTS

Participants were administered the PGSI once more during their T2 interview. As discussed above, the range of scores could be from 0 to 27 with a score of 0 indicating non-problem gambling, a score of 1 to 4 indicating a low level of problems with few or no identified negative consequences, a score of 5 to 7 indicating a moderate level of problems leading to some negative consequences, and a score of 8 or more indicating problem gambling with negative consequences and possible loss of control. In this sample, the mean score at the time of the T1 interviews was 13.9. At the time of the T2 interview, the mean score of the sample had decreased to 4.3. During the T1 interviews, 84.8% of the sample scored in the problem gambling range; however, this was reduced to just 19.8% at the T2 interview (see Table 44). Moreover, whereas only 1.6% of the sample scored in the non-problem gambling range at the time of the T1 interview, this increased to nearly one-quarter of the sample (24.2 per cent) at the time of the T2 interview.

**TABLE 44: PGSI SCORES AT T1 AND T2**

| | T1 (n = 125) | T2 (n = 91) |
|---|---|---|
| Mean PGSI Score | 13.9 | 4.3 |
| Non-Problem Gambling | 1.6% | 24.2% |
| Low Level of Problem Gambling | 5.6% | 42.9% |
| Moderate Level of Problem Gambling | 8.0% | 13.2% |
| Problem Gambling with Negative Consequences | 84.8% | 19.8% |

While not part of the PGSI, participants were also asked whether they had claimed to others that they had been winning money gambling, but really were not. In total, at the time of the T1 interview, half the sample reported that they had never done this; however, when asked about this behaviour over the past six months at the T2 interview, this increased to 91.7%. While 20.3% reported that they did this 'most of the time' or 'almost always' during their T1 interview, this was reduced to just 1.0% at the T2 interview. On the issue of whether participants had ever hidden betting slips, lottery tickets, gambling money, or other signs of gambling from their spouse, children, or other important people in their lives, one-quarter of the T1 sample reported that they did this 'most of the time' or 'almost always'. Again, this was reduced to just 3.1% of the sample at the time of the T2 interview. Finally, on the issue of losing time from work or school due to gambling, while only 4.6% reported that this happened 'most of the time' or 'almost always' during the T1 interview, none of the participants in the T2 interview reported this. In fact, 92.6% indicated that this had never happened over the past six months. As noted earlier, 11 participants reported that they attempted to violate their VSE agreement at some point in the past six months. PGSI scores were compared for those who had attempted to violate at least once ($X$ = 8.81, SD = 6.9) and those who had not attempted to violate ($X$ = 3.7, SD = 4.3) and the difference was statistically significant.[44]

The GPS total score also declined in the T2 sample. In the T1, the average GPS was 4.3 whereas in the T2 sample it was 2.6 (SD = 2.5) indicating that while there continued to be a small amount of preoccupation with gambling over the past seven days, this was less likely to occur six months after exclusion began. Specifically, when asked about how often participants thought about gambling in the past seven days, 51.0% reported that they did not think about gambling at all while an additional 41.7% stated that they thought about gambling only 'some of the time'. In effect, 2.1% of participants reported that, over the past seven days prior to their T2 interview, they thought about gambling 'all of the time'. In terms of the urge to gamble, over the seven days prior to their T2 interview, 57.3% of participants reported that they do not experience any urges to gamble and an additional 35.4% experience gambling urges only 'some of the time'. Here, only 3.1% (n = 3) reported experiencing urges to gamble 'all of the time' and four other participants reported feeling urges to gamble 'most of the time'. Of note, of those who did experience urges to gamble over the previous seven days (n = 41), 58.5% reported being able to control those urges 'all of the time', while only one participant indicated that they were never able to control these urges. Furthermore,

---

[44] $t$ (11.1) = -2.38, p = .036

22.0% were able to control their urges 'some of the time'. When participants enrolled in the VSE program, 88.5% believed that they had a gambling problem. However, when asked whether they felt they currently had a gambling problem, the proportion was reduced to 64.6%.

The GPS and PGSI continued to be strongly and positively correlated in the T2 sample.[45] However, although participants who attempted to violate their agreement exhibited larger mean scores on the GPS ($X$ = 3.9, SD = 2.9) than those who did not attempt to violate ($X$ = 2.4, SD = 2.43), this difference was not statistically significant.[46] The Depression, Anxiety, and Stress Scale (DASS21) was administered once more to assess the severity of range of symptoms related to depression, anxiety, and stress at the time of participants' T2 interview. As outlined in the T1 section of this report, the mean depression score at the time of the T1 interview was 14.4, which put the sample in the moderate range, the anxiety mean score of 7.6 was in the normal to mild range, and the stress mean score of 15.4 was in the mild range. At the time of the T2 interview, the mean depression score decreased to 5.8 (SD = 5.9), the anxiety mean score decreased to 2.6 (SD = 3.6), and the stress mean score decreased to 6.7 (SD = 5.8), which put all three mean scores in the normal range.

In terms of attending counselling over the past six months, only 18.8% of the T2 sample (n = 18) indicated that they participated in problem gambling counselling or treatment in British Columbia. Of those who did attend some form of gambling counselling or treatment over the past six months, 55.6% found the experience 'very helpful' and an additional 22.2% found the experience 'somewhat helpful'. Only one participant indicated that the experience was 'very unhelpful'. For those participants who indicated that the counselling or treatment was helpful, the main themes for why they felt that way were because the counsellor was able to provide suggestions, advice, or tools that contributed to not gambling, the sessions provided insights into the source of one's gambling addiction, and that it was just good to talk with someone who understood what the participant was going through. The one participant who did not feel that the counselling sessions were helpful stated that this was because they had heard it all before, the sessions did not do anything new, and because they still had to deal with their problem on their own. "I've seen so many counsellors in my lifetime, they all say the same things and it has never helped".

As demonstrated in Table 45, there were a variety of reasons why participants did not attend problem gambling counselling or treatment in the past six months prior to the T2 interview. The only reason that most participants agreed with was that the participant was using the VSE program instead of problem gambling counselling or treatment (56.8 per cent). Given this, it might be helpful for those who are enrolling or re-enrolling clients into the program to emphasize the benefits of treatment and counselling in addition to the VSE program. Of note, nearly half of the sample (49.0 per cent) indicated that a reason for not seeking counselling or treatment for problem gambling was because they did not feel that they needed this type of support. Given the sample's mean PGSI score at the T2 interview, this may not be entirely unfounded. Of note, there were no statistically

---

[45] $r$ (89) = .524, p < .001

[46] $t$ (94) = -1.89, p > .05

significant differences in the PGSI score when comparing those who had accessed counselling in the past six months ($X$ = 4.4, SD = 4.5) and those who had not ($X$ = 4.3, SD = 5.0).[47]

**TABLE 45: REASONS FOR NOT ATTENDING PROBLEM GAMBLING COUNSELLING OR TREATMENT IN THE PAST SIX MONTHS (N = 78)**

| | |
|---|---|
| I am using the VSE program instead of problem gambling counselling or treatment | 56.8% |
| I do not believe that I need problem gambling counselling or treatment | 49.0% |
| I relied on my friends/family instead | 45.8% |
| I have tried it before, and it did not work | 42.9% |
| I did not feel that it would be helpful | 33.7% |
| I have tried it before and feel that I have gotten all that I can from it | 31.4% |
| I have tried it before, and I did not like it | 20.0% |

While it was somewhat disconcerting that nearly half the sample (42.9 per cent) reported that they had tried problem gambling counselling or treatment in the past and found that it was not helpful, it is somewhat encouraging that only one-third of participants (33.7 per cent) believed that these types of supports would not be helpful (see Table 45). The main themes that emerged from those who believed that problem gambling counselling or treatment would not be helpful included that because participants had a gambling problem for so long, they did not believe that their issues could be resolved or disappear. Some participants believed that they could handle their gambling problems on their own, while others believed that they did not have a gambling problem, that they had it under control, or that they already had the necessary tools to address their gambling.

Only 5.2% of the sample (n = 5) used any other kinds of online or community-based forms of gambling treatment or counselling, or non-gambling programs or services to help with the consequences of gambling in the past six months. Among these five participants, the programs they used were Gambler's Anonymous (n = 2), GAM Info Helpline (n = 2), mental health treatment (n = 1), financial counselling (n = 3), and relationship counselling (n = 2). Of note, only one participant stated that the VSE program played a direct role in their decision to access any online or community-based programs or services.

Participants were again assessed on the Quality of Life (EURSIS-QOL) scale. At the time of the T1 interview, the mean overall rating for the sample on their quality of life was 3.2 suggesting 'neither good nor poor'. This rating increased slightly to 3.9 (SD = 1.1) at the time of the T2 interview. When asked about having enough energy for everyday life, the mean score was 3.2 at the time of the T1 interview suggesting a moderate level of energy. This score increased slightly to 3.4 (SD = 1.3) at time of the T2 interview. On the issue of having enough money to meet one's needs, at T1, the mean score was 3.1, which fell into the 'moderately' category. This increased to 4.0 (SD = 1.3) at T2, which fell into the 'mostly' category. When asked about their health at T1, the mean score was 3.1 suggesting 'neither satisfied nor unsatisfied'. Again, there was a slight increase at T2 to a mean

---

[47] $t$ (89) = -.011, p > .05

score of 3.5 (SD =1.2). In terms of their ability to perform their daily living activities, the mean score at T1 was 3.4, which fell into the 'neither satisfied nor unsatisfied'. This score increased to a mean of 3.8 (SD = 1.1) at T2, which was approaching the 'satisfied' range. When asked how satisfied participants were with themselves, at T1, the mean score was 2.7, which placed the sample at the higher end of the 'dissatisfied' category. At T2, the mean score was 3.7 (SD =1.0), which was approaching the 'satisfied' range. In terms of personal relationships, at T1, participants' mean score was 3.1 suggesting 'neither satisfied nor unsatisfied'; however, the mean score at T2 increased to 3.9 (SD = 1.0) bordering the 'satisfied' range. Finally, on the issue of being satisfied with the conditions of their living place, at T1, the sample's mean score was 3.7 again suggesting 'neither satisfied nor unsatisfied'. The mean score increased to 4.2 (SD = 0.9) at T2, which was in the 'satisfied' range. In effect, all the mean scores increased in a positive way at T2 compared to T1.

## PERCEPTIONS OF THE VSE PROGRAM

Participants were asked whether they had experienced any specific benefits due to being enrolled in the VSE program. As demonstrated in Table 46, there were several benefits associated with being enrolled in the VSE program. Nearly all participants (93.7 per cent) stated that they had saved money, with approximately three-quarters indicating that they were able to pay down debt (77.1 per cent) and that they were able to pay other bills on time (72.9 per cent). A similar proportion reported that they were able to spend more money on themselves, such as on a vacation, and slightly less than two-thirds (61.4 per cent) stated that being able to pay their rent or mortgage on time was another benefit. Importantly, approximately three-quarters of participants (76.0 per cent) suggested that being enrolled in the VSE program contributed to improving their mental health and most participants (53.2 per cent) said that enrollment in the VSE program benefited their physical health. It would also appear that enrollment in the VSE program contributed to participants being more social, as 80.3% indicated that they were spending more time with family and friends after enrolling in the program. Additional benefits of enrolling in the VSE program included an increase in self-esteem and self-control, an improvement in one's work performance, an increase in one's level of overall happiness, and feeling less tired and getting better sleep.

**TABLE 46: BENEFITS EXPERIENCED WHILE BEING ENROLLED IN VSE PROGRAM (N = 96)**

|  | Agree |
|---|---|
| Saving money | 93.7% |
| Spending more time with family/friends | 80.3% |
| Paying down debt | 77.1% |
| Improvements in my mental health | 76.0% |
| Paying other bills on time | 72.9% |
| Spending money on myself | 72.9% |
| Paying my rent or mortgage on time | 61.4% |
| Improvements in my physical health | 53.2% |

Overall, six months ago, after enrolling in the VSE program, slightly more than one-third of participants (35.4 per cent) reported that it was very easy to not gamble. While an additional 19.8%

stated that it was 'somewhat easy', a similar proportion indicated that it was 'somewhat difficult', and another one-quarter of the sample reported that it was 'very difficult' to not gamble. However, when asked to compare how they felt six months ago compared to now, the proportion of participants who believed that it was 'very easy' to not gamble doubled to 66.7%. Moreover, only 3.1% now felt that it was 'very difficult' to not gamble compared to 25% at the time of enrollment. In total, compared to six months ago, 81.3% of participants indicated that they thought 'less often' about gambling than before and only 4.2% stated that they thought about gambling 'more often' than six months ago.

Participants were asked how satisfied they were with various aspects of the VSE program. As demonstrated in Table 46[48], except for catching VSE program participants who tried to re-enter a gaming facility while excluded, most participants were either satisfied or very satisfied with all aspects of the program. More specifically, with respect to an assessment of the entire program, 58.3% of participants stated that they were 'very satisfied' and 31.3% stated that they were 'somewhat satisfied'. Similarly, 64.6% were 'very satisfied' with the privacy of the enrollment process and another 29.2% were 'somewhat satisfied'. In terms of the enrollment options available through the VSE program, 49.0% were 'very satisfied' and another 37.5% were 'somewhat satisfied'. The two aspects of the VSE program with the lowest levels of satisfaction were catching VSE program participants who tried to re-enter a gaming facility while excluded (20.4 per cent were very satisfied and 23.7 per cent were satisfied), and the penalties in place for those who were caught re-entering a gaming facility while excluded (27.1 per cent were very satisfied and 28.1 per cent were satisfied). Moreover, 21.9% of participants were 'very satisfied' and 37.5% were 'somewhat satisfied' with the VSE program's advertising and marketing.

**TABLE 47: SATISFACTION WITH ASPECTS OF THE VSE PROGRAM (N = 96)**

| | Dissatisfied | Satisfied |
|---|---|---|
| Privacy of the enrollment process | 2.1% | 93.8% |
| The entire program | 4.1% | 89.6% |
| Available enrollment options of 6 months to 3 years | 9.4% | 86.5% |
| Providing a non-judgmental process of enrollment | 5.1% | 82.3% |
| Application of the program across BC | 3.1% | 79.2% |
| Deterring casino-based gambling | 12.5% | 73.0% |
| Connecting me to gambling counselling or treatment | 8.4% | 67.7% |
| Program advertising and marketing | 12.5% | 59.4% |
| Penalties in place for those who are caught re-entering a gaming facility while excluded | 9.4% | 55.2% |
| Catching VSE program participants who try to re-enter a gaming facility while excluded | 16.1% | 44.1% |

In terms of additional resources that participants would like to see offered by BCLC for VSE clients, while a minority of participants (40.6 per cent) wanted resources related to time management

---

[48] The percentages for each aspect do not equal 100% because those who selected 'neither dissatisfied nor satisfied' are not presented in the Table.

while gambling, a slight majority (53.1 per cent) were interested in money management while gambling resources (see Table 47a). A slightly larger proportion (59.4 per cent) wanted budgeting tools offered to VSE clients, and approximately two-thirds of participants were interested in additional resources related to support groups (65.6 per cent) and responsible gambling education resources (64.6 per cent). The greatest degree of support among participants was for community resources to assist with responsible gaming, such as credit counselling or services at seniors' centres (70.8 per cent). When asked if there were any other additional resources participants were interested in, the main themes were information about the odds related to various casino games, more information about the root causes of gambling and the possible detrimental effects of gambling, and having more resources available to access online.

**TABLE 47A: ADDITIONAL RESOURCES PARTICIPANTS WOULD LIKE BCLC TO OFFER (N = 96)**

| | |
|---|---|
| Community resources to assist with responsible gaming | 70.8 |
| Support groups | 65.6 |
| Responsible gambling education | 64.6 |
| Budgeting tools | 59.4 |
| Resources for money management while gambling | 53.1 |
| Resources for time management while gambling | 40.6 |

When asked about how effective facial recognition software at all gaming facilities would be for improving the VSE program, 73.9% of participants indicated that this would be 'very effective' and an additional 16.3% stated that facial recognition would be 'somewhat effective'. However, on the issue of requiring a mandatory responsible gaming program before being allowed to return to a gaming facility, only 39.4% of participants believed that this would be 'very effective' at improving the VSE program and an additional 30.9% believed that this would be 'somewhat effective'. Similarly, offering optional responsible gaming programs while excluded was believed by 37.2% of participants to be 'very effective' at improving the VSE program and an additional 39.4% believed that this would be 'somewhat effective'. In terms of additional screening at gaming facilities, 66.0% of participants felt that mandatory identification checks at gaming facility entrances would be 'very effective' and another 21.3% thought that this would be 'somewhat effective'. There was less belief in the ability of random identification checks at gaming facility entrances; however, as only 39.5% believed this strategy would be 'very effective' and another 35.1% thought this would be 'somewhat effective'.

There were several main themes that emerged from participants on how they were spending their time now that this time was not spent gambling. These themes included spending more time with family, friends, and pets, focusing on their physical and mental health, being more present in their personal and work lives, engaging in other forms of entertainment or hobbies, such as camping, reading, watching movies or television, playing video games, painting, and reading, learning how to cook or spending more time cooking, doing home renovations or gardening, going on vacations, or shopping. The most common responses involved spending more time with family and friends, engaging in other forms of entertainment, and working.

Participants reported experiencing many additional positives because of their enrollment in the VSE program. These can be broken down into personal benefits, financial benefits, and psychological benefits. The personal benefits included spending more time with family and friends, being more present and productive in their personal and work lives, and a general improvement in their personal relationships characterized, in part, by less conflict. Participants also spoke about having a greater appreciation for the people around them, they have found that they were eating and sleeping better, enjoyed having more free time because they were not at the casino, and had experienced a general improvement in their overall quality of life, including their physical health. Some participants spoke about the overall benefit of simply taking a break from gambling. In terms of financial benefits, in addition to having more money and being able to save more money, participants spoke about their satisfaction in being able to pay down debts, spend money on personal things instead of losing it at the casino, and learning how to budget their money and plan for retirement. Participants also indicated that there were several positive psychological outcomes resulting from their enrollment in the VSE program. Here, participants spoke about feeling better about themselves and being generally happier, having an increased sense of self-esteem and self-worth, and experiencing less stress and anxiety generally and related to gambling. Some participants identified that they were no longer consumed with thoughts of gambling, not always thinking about or worried about gambling and its consequences, and were happy about being able to devote their mental and emotional energies to something other than gambling.

However, participants did identify some negative things that they felt resulted because of their enrollment in the VSE program. On a personal level, some participants reported that they missed the social aspects of being at a gaming facility, especially the people they would interact with. Financially, some participants spoke of the loss of being able to buy whatever they wanted when they won money, and psychologically, participants spoke about an increase in their level of boredom, being annoyed that they could not gamble, missing the excitement associated with gambling, experiencing the consequences of not having the stress outlet that gambling provided them, and an increase in some compulsive behaviours possibly as a substitute for the loss of gambling.

In terms of the VSE program's strengths, perhaps the most important finding was that many participants believed that the program worked well and contributed to preventing them from gambling. In terms of more specific strengths, participants highlighted the benefits of the program being province-wide and that it was abstinence-based. Participants felt that a strength of the VSE program was that it attempted to keep people out of the casino who needed assistance in doing so, that counselling and treatment was offered as part of the program, and that it had a strong deterrent aspect related to the consequences of getting caught and not being able to keep any winning from jackpots. In effect, participants felt that a strength of the VSE program was that it kept people out of the casino by creating a psychological and physical barrier for those who do not want to go to the casino. Moreover, participants indicated that an additional strength of the program was that those who were involved in enrolling clients into the program did not make them feel bad about needing help and that the enrollment process provides a sense of understanding rather than guilt. Those who enrolled participants were viewed as very understanding, professional, and helpful. To that end, participants mentioned that the program was easy to understand and follow but was strict and rigid in terms of its conditions. In other words, the VSE program contributed to

one's self-awareness that clients had a gambling problem and provided a service to assist those who might feel like they had lost everything, and no one understood or cared. Finally, participants stated that a strength of the program was that it taught those who were interested better money management skills and strategies.

Participants also provided recommendations to improve the VSE program or things that they would like to see changed. While most participants indicated that they could not think of any recommendations or things to improve the program, some client suggestions included requiring all patrons to provide identification prior to being admitted into a gaming facility and using facial recognition more extensively, including a summary of wins and losses on one's BCLC program card, and increasing the amount of advertising that BCLC did about the VSE program. Participants also provided suggestions related to the amount of time that one could be excluded. Some argued that they would like to see a three-month exclusion period option and others argued for longer periods, such as four or five years and even a lifetime exclusion option. While there are some very good reasons for not permitting this, a few participants suggested that they would like the option to change the length of enrollment once they started in the program. One participant suggested including warning advertisements, like that on packages of cigarettes, throughout the gaming facility and on all BCLC products warning people suffering from financial difficulties or having mental health challenges about the risks and potential consequences of gambling.

While some participants advocated for the possibility of a temporary pause to one's exclusion to allow attendance at a concert or an event at a gaming facility, while still maintaining the ban on gambling, others suggested that the VSE program should enforce a complete exclusion to the entire gaming facility property, including restaurants. Some participants also wanted to see gaming facility staff be more proactive in approaching patrons about the VSE program. It was also interesting that participants understood that part of the VSE program included eliminating any contact between BCLC and the client; however, there was some desire among clients that BCLC check-in to see how clients were doing while excluded. This might provide an additional opportunity for BCLC to encourage treatment or counselling options. There was also a call for online courses that BCLC could make available to VSE clients focussed on gambling awareness and prevention. For those in smaller towns or rural communities, participants indicated that they would like more resources and groups that could assist clients with their gambling issues.

In terms of the process of enrollment, some participants suggested the need for additional ways to enroll in the program that avoided the need to go to BCLC headquarters or a casino, such as allowing enrollment to occur in other government facilities. There are obvious challenges with this recommendation, but some participants were not particularly interested in enrolling online and found it difficult to enter a gaming facility, even for the purpose of enrolling in the VSE program. Other participants suggested that it was embarrassing to have to walk through the casino after completing the enrollment process and that it would be beneficial to reduce the amount of time spent waiting outside the security office to begin the process of enrolling in the program. Finally, some participants wanted more of a deterrent to violating their agreement in the form of fines or other sanctions. In effect, there was a small group of participants who wanted the program to be policed better in terms of catching people and making the consequences more severe to serve as a deterrent and a punishment.

As highlighted throughout this section of the report, the strengths of the VSE program, from the perspective of clients, were that it made them accountable to themselves and others for their behaviour, provided them access to needed treatment and counselling, played a role in improving their personal and professional relationships, the overall speed at which the enrollment process occurred and the immediacy of the effects of enrolling in the program, and providing clients with psychological and physical barriers to gamble because of enrolling in the program. Participants also pointed out that some key strengths of the VSE program were that it contributed to clients saving money and having more money, that it both provided an external control over their gambling, but also gave them a sense of personal control over their gambling and, knowing that they were enrolled, reduced their urges and desire to gamble. A further strength was that the program provided anonymity and was confidential. Still, overall, the most common theme was that the strength of the VSE program was that participants did not gamble anymore because of their enrollment in the program. This general sentiment was supported by the fact that 78.1% of participants strongly agreed with the statement "I would recommend the VSE program to others". An addition 18.8% agreed with the statement and only one participant 'strongly disagreed' while two participants 'disagreed'.

## T1 to T2 Trends

In total, 94 participants had matched data available for both the T1 and T2 interviews. Demographics were compared between participants in the two samples. There were no statistically significant differences. Importantly, the average PGSI scores of those who completed only a T1 ($X$ = 12.3, SD = 6.5) and those who did both a T1 and T2 ($X$ = 14.5, SD = 6.1) did not differ significantly. Gender was divided between males and females, with the majority (53.2 per cent) identifying as female. Slightly more than one-third (35.1 per cent) of the sample was married, with the next largest category composing those who were single (18.1 per cent). Over half (56.4 per cent) of the sample resided in the Lower Mainland while the remainder came from the Interior (21.3 per cent), Vancouver Island (14.9 per cent), or North (7.4 per cent). Three-quarters of the sample were Caucasian (71.3 per cent) while the next largest group were Asian (9.6 per cent) followed by Indigenous (7.4 per cent). Age ranged between 20 and 84 years old; the average was 49.7 years old (SD = 15.8 years old).

When considering whether participants had violated their VSE agreement between the time of their enrollment and the T2 interview approximately six months later, a total of 13 participants (13.8 per cent) had attempted to violate at least once. The subsequent analyses compared whether any of the changes between T1 and T2 problem gambling or mental health scales were associated with whether the participant attempted to violate their agreement at some point between their T1 and T2 interviews.

Mean scores were computed at the total and item level for the PGSI. The total score dropped both substantively and significantly between T1 and T2, with an average decrease of 10 points (see Table 48). Similarly, all nine of the PGSI statements declined statistically significantly between T1 and T2. Three participants (3.4 per cent) exhibited higher scores on the T2 than they did on the T1, while four exhibited the same score (4.6 per cent). The remaining 92.0% experienced reductions in

their PGSI scores from the time of their T1 interview to their T2 interview. Keeping in mind that any reduction in PGSI should be considered positive, it is noteworthy that the largest mean difference occurred when comparing participants on the issue of betting more than one could afford to lose ($X$ difference = 1.6, SD = 1.2), followed by going back to a gaming facility another day to try and win back lost money ($X$ difference = 1.5, SD = 1.2).

**TABLE 48: PGSI SCORES BETWEEN T1 AND T2 (N = 77)**

|  | T1 Average | T2 Average |
|---|---|---|
| Bet more than you could really afford to lose | 1.9 | 0.3*** |
| Needed to gamble with larger amounts of money to get the same feeling | 1.6 | 0.3*** |
| Go back another day to try and win back the money you lost | 1.8 | 0.3*** |
| Borrowed money or sold anything to get money to gamble | 0.7 | 0.1*** |
| Felt you might have a problem with gambling | 2.0 | 1.3*** |
| Gambling caused you any health problems, including anxiety or stress | 1.5 | 0.4*** |
| Criticized your betting or told you that you have a gambling problem | 1.1 | 0.4*** |
| Gambling caused any financial problems for you or your household | 1.5 | 0.4*** |
| Felt guilty about the way you gamble or what happens when you gamble | 2.2 | 1.0*** |
| PGSI Total Score | 14.7 | 4.5*** |
| *p < .05, ** p < .01, *** p < .001* | | |

Neither PGSI scores at T1 nor at T2 differed significantly for the violator sub-group when compared to the non-violator sub-group. Interestingly, when the PGSI scores were compared between those who had violated ($X$ = 8.5, SD = 7.8) and those who had not ($X$ = 10.5, SD = 6.7), the results were not statistically significant. Changes in the PGSI scores were also unrelated to gender, marital status, education level, employment status, income level, region of residence, language, ethnicity, or age.

It is not surprising that PGSI scores dropped substantively and significantly between the T1 and T2 interviews. This is because many participants abstained from gambling or at least from attempting to violate their agreement. Given this pattern of abstinence, experiencing the negative consequences from gambling behaviours that the PGSI measures will naturally be reduced over this period. As mentioned previously, the authors of this report designed the GPS for this reason; namely to measure changes in preoccupation with thoughts about gambling. Notably, the total GPS scores also declined significantly between the T1 and T2 interviews from an average of 4.2 at the T1 interview to an average of 2.5 at the T2 interview. Each statement on the GPS experienced significant reductions, except for controlling their urges to gamble (see Table 49). Given this, participants experienced not only a reduction in problem gambling behaviours but also preoccupation with thoughts of gambling during their first six months of enrollment.

**TABLE 49: GAMBLING PREOCCUATION SCALE SCORES BETWEEN T1 AND T2 (N = 71)**

| In the past 7 days how often did you… | T1 Average | T2 Average |
|---|---|---|
| Think about gambling | 0.9 | 0.6*** |
| Think about the consequences of your gambling | 1.6 | 0.8*** |
| Think about how it feels when you're gambling | 1.0 | 0.6** |
| Experience the urge to gamble | 0.7 | 0.5** |
| Control your urges to gamble (n=23) | 2.6 | 2.5 |
| GPS Total Score | 4.2 | 2.5*** |
| *p < .05, ** p < .01, *** p < .001* | | |

Like with the PGSI difference scores, neither GPS scores at T1 or T2 differed based on whether the participant violated their VSE agreement between the time of their T1 and T2 interviews. Further, the GPS difference scores were no different for those who violated ($X$ = 1.7, SD = 2.7) and those who did not violate ($X$ = 1.8, SD = 3.5) their VSE agreement. Interestingly, GPS score changes differed significantly by gender. Males ($X$ = 2.4, SD = 3.1) exhibited a larger mean decrease difference when comparing T1 to T2 scores than did females ($X$ = 1.2, SD = 2.5) suggesting that males had a greater reduction in preoccupation about gambling.[49] GPS score changes between T1 and T2 were unrelated to marital status, education level, employment status, income level, region of residence, language, ethnicity, or age.

Scores on each of the Depression, Anxiety, and Stress scales of the DASS-21 also dropped statistically significantly between the T1 and T2 interviews, with the largest reduction in the means for Depression (see Table 50). Whereas participants were in the 'moderate' range of Depression at the T1 interview, their feelings of depression dropped to the 'normal' range by the time of their T2 interviews. Anxiety remained in the 'normal' range when assessed at both the T1 and T2 interview, although the scores still dropped by a statistically significant amount. Stress at T1 was in the mild level; however, by the T2 interview, this had dropped into the 'normal' range. In other words, six months after enrolling in the VSE program, program participants, on average, were experiencing 'normal' ranges of depression, anxiety, and stress.

**TABLE 50: DASS-21 SCORES BETWEEN T1 AND T2 (N = 71)**

| | T1 Average | T2 Average |
|---|---|---|
| Depression | 14.1 | 5.6*** |
| Anxiety | 6.9 | 2.6*** |
| Stress | 15.2 | 6.8*** |
| *p < .05, ** p < .01, *** p < .001* | | |

Participants who violated their VSE agreement when compared to those who did not violate did not differ significantly on either the T1 or T2 DASS-21 scales. None of the Depression, Anxiety, or Stress score changes between T1 and T2 were significantly associated with whether the participant

---

[49] $t$ (84) = 2.01, p = .048

violated their agreement in the time between the T1 and T2 interviews. Changes in Depression, Anxiety, and Stress scores between T1 and T2 also did not differ significantly by gender, marital status, education level, employment status, region of residence, language, ethnicity, or age. While the Anxiety and Stress score changes did not vary by income, changes to the DASS-21 Depression scores did. There was a statistically significant relationship between DASS-21 Depression Difference scores and income levels with the significant mean differences occurring between those who earned $20,000.00 to $49,999.99 compared to those who earned $100,000.00 or more (p = .007).[50] Those who earned $20,000.00 to $49,999.99 had an average of a 9.4-point (SD = 8.7) change in the DASS-21 Depression score whereas those who earned $100,000.00 or more only experienced a 1.5 point (SD = 3.5) reduction change.

All measures of the Quality of Life instrument statistically significantly improved between T1 and T2. This was particularly notable given that two-thirds of the interviews were conducted during the onset of the COVID-19 pandemic. Yet, despite the substantial changes many participants likely experienced, they still reported significant improvements in the quality of life measures while excluded from formal gambling (see Table 51).

**TABLE 51: EURSIS-QOL SCORES BETWEEN T1 AND T2 (N = 77)**

| | T1 Average | T2 Average |
|---|---|---|
| Quality of Life | 3.2 | 3.9*** |
| Enough Energy for Everyday Life | 3.2 | 3.5* |
| Have Enough Money to Meet Needs | 3.2 | 4.0*** |
| Satisfied with Health | 3.0 | 3.5*** |
| Satisfied with Ability to Perform Daily Living Activities | 3.4 | 3.8** |
| Satisfied with Yourself | 2.7 | 3.7*** |
| Satisfied with Your Personal Relationships | 3.1 | 3.9*** |
| Satisfied with Conditions of Your Living Place | 3.7 | 4.2*** |
| *p < .05, ** p < .01, *** p < .001* | | |

Most of the quality of life measures did not differ at either T1 or T2 when comparing them against whether the participant violated. There was one exception. Those who violated or attempted to violate their VSE agreement had a significantly lower Quality of Life score at T2 when it came to being satisfied with their personal relationships ($X$ = 3.4, SD = 0.9 as compared to $X$ = 4.0, SD = 0.9).[51] None of the other Quality of Life scores differed, nor did the average difference score when comparing T1 and T2 scores and whether the participant violated the terms of their VSE agreement. When measuring the change between T1 and T2, one quality of life indicator varied significantly by gender. Here, females experienced a statistically significantly larger increase in satisfaction with self by T2 (*Xdifference* = 1.3, SD = 1.3) compared to males (*Xdifference* = 0.7, SD = 1.3).[52] There were

---

[50] $F_{\text{Welch}}$ (4, 8.3) = 8.3, p = .025

[51] $t$ (92) = 2.3, p = .021

[52] $t$ (91) = 2.4, p = .021

two statistically significant differences when comparing the Quality of Life changes based on marital status. The first was the indicator measuring satisfaction with self.[53] Those who were in a dating relationship did not experience any change in their scores on being satisfied with self, while those who were separated experienced an increase in scores by 2.2 points (SD = 1.3) (p = .043). The second difference was the indicator for satisfaction with health.[54] The difference here was again found when comparing those who were dating to those who were separated (p = .047). Those who were dating had a decreased level of satisfaction in their health by 0.4 (SD = 1.0), while those who were separated had an increase of 1.4 (SD = 0.5). No other marital statuses differed from each other on this indicator, or any of the remaining indicators of quality of life. Of note, the one statement about satisfaction with the conditions of your living place varied based on ethnic group membership.[55] The only group differing significantly here were Asians and South Asians (p = .010). Participants who identified as South Asian experienced an average increase of 1.4 (SD = 0.5) on this quality of life indicator, whereas people who identified as Asian experienced an average decrease of 0.1 (SD = 0.6) in their satisfaction with the conditions of their living place. There was a significant difference when comparing primary language to the changes on the indicator that measured satisfaction with self. The t-test revealed that those who spoke English experienced a statistically larger increase in scores (*Xdifference* = 1.05, SD = 1.35) than those who did not speak English as their primary language (*Xdifference* = 0.38, SD = .52).[56] There were no significant differences in the change of quality of life indicators between T1 and T2 based on other demographic variables.

In terms of correlations between the difference scores, there were some statistically significant patterns. There were statistically significant positive correlations between all DASS-21 scale differences and the PGSI total score differences (see Table 52). DASS-21 scale differences were also significantly and positively correlated with the GPS differences. Interestingly, the GPS and the PGSI differences were not statistically significantly correlated with each other, which suggests they may each be tapping into different constructs of problem gambling.

**TABLE 52: CORRELATIONS BETWEEN T1 AND T2 DIFFERENCE SCORES**

|  | PGSI Difference | GPS Difference | DASS-21 Depression Difference | DASS-21 Anxiety Difference | DASS - 21Stress Difference |
|---|---|---|---|---|---|
| **PGSI Difference** | - |  |  |  |  |
| **GPS Difference** | .218 | - |  |  |  |
| **DASS-21 Depression Difference** | .393*** | .265* | - |  |  |
| **DASS-21 Anxiety Difference** | .475*** | .312** | .679*** | - |  |
| **DASS-21 Stress Difference** | .420** | .301* | .759*** | .690*** | - |
| *\* p < .05, \*\* p < .01, \*\*\* p < .001* |  |  |  |  |  |

---

[53] $F$ (6, 86) = 2.48, p = .029

[54] $F_{Welch}$ (6, 23.5) = 2.88, p = .030

[55] $F_{Welch}$ (4, 13.75) = 5.73, p = .006

[56] $t$ (18.28) = -2.87, p = .010

Overall, all item-level and total scores measured on both the T1 and T2 interviews changed significantly in the ideal directions. Scores on the PGSI, GPS, Depression, Anxiety, and Stress were significantly reduced over the six-month period between the T1 and T2 interviews, while scores on Quality of Life significant increased. While some of these changes were associated with demographic characteristics, for the most part, they were not affected by these factors. Given this, these findings lend support for the notion that a short period of forced abstinence from formal gaming brings relief, in terms of reductions in disordered gaming, and improves mental health and satisfaction with self, life, relationships, and other quality of life indicators. It was anticipated that some of these scales, in particular the PGSI, would be related to VSE agreement violation attempts. This was not the case in the current sample, though this may be reflective of the low sample size of violators (n = 13) and requires further research with larger samples to reach a firmer conclusion.

## PSYCHOMETRIC AND T1-T2 CHANGES

Of the 94 participants who completed both a T1 and T2 interview, 63 (58.9 per cent) also completed a psychometric interview. Nine of these participants were those who attempted to violate their agreement in the time between the T1 and T2 interviews. Analyses were conducted to compare the mean scores of those who violated against those who did not for the scales used in the Psychometric Interview. While some significant results were found and will be reported here, these results should be interpreted with extreme caution given the overall small number of violators. Rather, these findings should be interpreted as trends to explore in future research with larger sample sizes.

As shown in Table 53, two of the IGS subscales were statistically significant when comparing VSE agreement violators to those who had not violated their VSE agreement. Violators had significantly higher scores on the motivations for gambling that were driven by Negative Emotions, such as gambling when feeling depressed, as compared to those who did not attempt to violate their agreement. Similarly, those who violated their agreement also had significantly higher scores on the Social Pressure subscale suggesting that they were more likely to gamble when others around them expected them to or put pressure on them to gamble. Considering that some gamblers reported feeling pressure from friends or family to gamble while excluded, even when those friends or family were aware that the participant was excluded, this may explain one reason for why some participants attempted to return to a casino while excluded. This would be important to test against other potentially related constructs, such as self-control; however, the small sample size of violators prevents any further exploration of this relationship.

**TABLE 53: IGS SUBSCALE AVERAGES COMPARING VIOLATORS AND NON-VIOLATORS**

| | Non-Violator Average (SD) | Violator Average (SD) |
|---|---|---|
| Negative Emotions | 43.1 (25.4) | 56.3 (13.0) * |
| Conflict with Others | 23.2 (21.3) | 26.5 (17.4) |
| Urges and Temptations | 55.2 (23.1) | 61.7 (19.7) |
| Testing Personal Control | 34.9 (24.6) | 29.6 (20.6) |
| Pleasant Emotions | 47.3 (22.9) | 48.9 (19.7) |
| Social Pressure | 22.1 (16.5) | 34.9 (20.6) * |
| Need for Excitement | 52.2 (24.2) | 58.6 (16.7) |
| Worried about Debts | 18.9 (17.7) | 23.7 (17.0) |
| Winning and Chasing | 56.5 (27.9) | 58.0 (21.0) |
| Confidence in Skill | 39.5 (28.7) | 44.4 (29.6) |
| *\* p < .05, \*\* p < .01, \*\*\* p < .001* | | |

The Gambler's Beliefs Questionnaire total scores and factor scores were compared between violators and non-violators (see Table 54). While there were some differences when comparing the average scores on Factor 1 Luck/Perseverance and the Total Scores in the anticipated direction, these differences were not statistically significant. Again, a larger sample size of violators may reveal different findings.

**TABLE 54: GBQ SUBSCALE AVERAGES COMPARING VIOLATORS AND NON-VIOLATORS**

| | Non-Violator Average (SD) | Violator Average (SD) |
|---|---|---|
| GBQ Factor 1 Luck/Perseverance | 35.4 (13.6) | 43.9 (9.0) |
| GBQ Factor 2 Illusion of Control | 25.6 (10.8) | 28.1 (10.9) |
| GBQ Total Score | 60.6 (21.9) | 72.0 (18.0) |
| *\* p < .05, \*\* p < .01, \*\*\* p < .001* | | |

The next set of analyses explored several mental health related constructs and their potential relationship to violating the VSE agreement. In general terms, those who attempted to violate their VSE agreement had slightly elevated scores on depression and anxiety compared to non-violators (see Table 55). However, violators had a lower score on the hazardous alcohol use measure. Still, none of these mean differences were statistically significant. The DERS-18 for emotional regulation scales and total scores were compared next. The Awareness subscale was marginally non-significant at p = .054. However, the Clarity, Goals, Impulse, and Non-Acceptance scores, along with the DERS-18 Total Score, all differed significantly when comparing the average scores of non-violators to violators. In all cases, the violators exhibited significantly higher scores than the non-violators indicating that they experienced more difficulty in regulating their emotions in these domains. As explained earlier, Clarity refers to having a lack of clarity regarding one's own emotions, Goals refers to a lack of ability to engage in goal-directed activities during negative emotions, Impulse concerns the lack of an ability to manage one's impulses during negative emotions, and Non-Acceptance measures the lack of acceptance of one's emotions. These findings, together with the IGS Negative Emotion finding, may suggest that those who attempt to violate their agreement have a more difficult time recognizing and controlling their emotions, particularly when

experiencing mental health issues, such as depression or anxiety. Whereas they do not appear to experience significantly worse depression or anxiety than non-violators, they may be less prepared to manage their impulses to gamble when struggling with depression or anxiety. Thus, strategies to recognize and manage emotions may be an important area to address. Further research should explore these relationships in more depth and include a consideration of the use of counselling as a variable that may influence one's ability to either recognize and regulate emotions or regulate the impulse to gamble to deal with those negative emotions.

**TABLE 55: MENTAL HEALTH AND EMOTION DISREGULATION SCALE AVERAGES COMPARING VIOLATORS AND NON-VIOLATORS**

| | Non-Violator Average (SD) | Violator Average (SD) |
|---|---|---|
| Burns Depression Checklist Total Score | 14.6 (9.0) | 18.3 (8.3) |
| Generalized Anxiety Disorder | 5.1 (4.1) | 7.8 (4.7) |
| AUDIT-C | 3.5 (2.7) | 2.8 (2.0) |
| DERS-18 Awareness | 7.8 (3.1) | 9.3 (1.9) |
| DERS-18 Clarity | 5.0 (2.3) | 7.5 (2.4) ** |
| DERS-18 Goals | 7.8 (3.3) | 10.4 (2.7) * |
| DERS-18 Impulse | 5.0 (2.8) | 7.1 (2.6) * |
| DERS-18 Non-Acceptance | 6.1 (3.1) | 9.1 (3.1) ** |
| DERS-18 Strategies | 5.2 (2.6) | 6.8 (3.5) |
| DERS-18 Total | 36.9 (12.3) | 50.2 (10.0) ** |
| *$p < .05$, ** $p < .01$, *** $p < .001$ | | |

As previously noted, self-control and impulsivity are other potential factors to consider when understanding violation attempts. However, the current results revealed few significant differences when comparing those who violated to those who did not. Brief Self-Control Scores did not differ between the two groups (see Table 56) and while the Barratt Impulsivity Scale total score did differ significantly with violators exhibiting higher total average scores compared to non-violators, only one of the first order factors, Attention, was statistically significant. As discussed above, each of the three First Order Factors on the BIS is composed of two subscales. Attention is composed of the subscales Attention and Cognitive Instability. In the current study, the Attention subscale was marginally non-significant, $p = .053$. While these findings were not anticipated, there are two potential explanations. First, the small sample size may have prevented relationships from being detected. Second, it is plausible that the disordered gamblers in the current sample shared the underlying traits of low self-control and impulsivity as factors relating more broadly to their problem gambling and, therefore, did not differ specifically on the violation variable. Instead, other factors, such as their dysregulation of negative emotions and tending to gamble to cope with negative emotions may be more relevant to their attempts to violate their VSE agreement. For example, they may be driven to gamble when distressed and unable to otherwise cope. Future research with a larger pool of violators and with data from non-disordered gambling samples would be needed to further explore these explanations.

**TABLE 56: SELF-CONTROL AND IMPULSIVITY SCALE AVERAGES COMPARING VIOLATORS AND NON-VIOLATORS**

| | Non-Violator Average (SD) | Violator Average (SD) |
|---|---|---|
| Brief Self-Control Scale | 40.9 (9.0) | 39.8 (4.7) |
| BIS Attention | 9.8 (2.9) | 11.7 (2.2) |
| BIS Cognitive Instability | 5.7 (2.1) | 6.1 (1.7) |
| BIS Motor | 15.8 (4.5) | 16.8 (4.0) |
| BIS Perseverance | 7.0 (1.5) | 7.8 (1.3) |
| BIS Self-Control | 12.9 (3.7) | 14.1 (3.1) |
| BIS Cognitive Complex | 12.7 (2.3) | 13.5 (1.6) |
| BIS 1$^{st}$ Order Attention | 15.5 (4.2) | 17.8 (1.60) * |
| BIS 1$^{st}$ Order Motor | 22.9 (5.0) | 24.6 (3.8) |
| BIS 1$^{st}$ Order NonPlanning | 25.6 (5.2) | 27.6 (3.5) |
| BIS Total Score | 64.3 (12.3) | 70.0 (6.2) * |
| *p < .05, ** p < .01, *** p < .001* | | |

The findings that emotional dysregulation appears to be a contributing factor to violation attempts was further supported by the analyses of the Big 5 personality traits. The only Big 5 measure that violators and non-violators differed significantly on was Emotional Stability, where those who violated the VSE agreement had a significantly lower score (see Table 57). This is particularly relevant as while violators and non-violators themselves did not differ on the PGSI scores, in the earlier analyses, Emotional Stability exhibited a statistically significant negative correlation with PGSI scores suggesting that problem gambling behaviours were associated with problems in Emotional Stability. As already suggested above, this data is in line with the findings that violators in the current study appear to have issues identifying and regulating their emotions and tended to gamble to cope with negative emotions, such as those that may occur when they are having difficulty with their personal relationships.

**TABLE 57: IPPI AVERAGES OF THE BIG 5 AVERAGES COMPARING VIOLATORS AND NON-VIOLATORS**

| | Non-Violator Average (SD) | Violator Average (SD) |
|---|---|---|
| Extraversion | 31.8 (9.5) | 27.1 (9.2) |
| Agreeableness | 41.4 (5.7) | 38.8 (8.7) |
| Conscientiousness | 37.2 (7.8) | 33.0 (5.9) |
| Emotional Stability | 31.2 (7.3) | 25.3 (7.9) * |
| Intellect and Imagination | 36.6 (6.2) | 33.1 (6.3) |
| *p < .05, ** p < .01, *** p < .001* | | |

The final set of measures examined sources of potential stress and overall life satisfaction. There was not a substantive or significant difference when comparing the average scores on the Financial Stress from Gambling scale (see Table 58). While violators had slightly higher mean scores for the Financially Focused Scale and Stress Proneness Scale compared to non-violators, these differences were not statistically significant. However, Diener et al.'s measure of Life Satisfaction at a total score level differed when comparing the averages between violators and non-violators. Those who violated their VSE agreement had significantly lower Life Satisfaction scores than those who had

not violated. Like with all analyses in this section, whether this was a contributing factor to violating or a consequence of it cannot be determined from the nature of the data. However, it is relevant to consider, particularly with the Quality of Life indicators where there was a difference in satisfaction with personal relationships. Again, based on the data presented above, when a VSE participant was dissatisfied with a personal relationship and experiencing negative emotions that they were struggling to effectively identity and cope with, gambling appeared to be a possible outlet for those who ended up violating their VSE agreement. Designing some alternative coping strategies for difficult emotions and stressful events, such as relationship struggles, may be part of designing methods of assisting problem gamblers to address their motivations for and impulses towards gambling.

**TABLE 58: STRESS AND LIFE SATISFACTION AVERAGES COMPARING VIOLATORS AND NON-VIOLATORS**

|  | Non-Violator Average (SD) | Violator Average (SD) |
|---|---|---|
| **Financial Stress from Gambling Scale** | 5.11 (3.8) | 5.7 (5.1) |
| **Financially Focused Scale** | 31.3 (17.3) | 35.2 (14.3) |
| **Stress Proneness Scale** | 18.7 (7.0) | 23.0 (6.2) |
| **Life Satisfaction Total Score** | 21.1 (7.7) | 17.7 (3.7) * |
| *\* p < .05, \*\* p < .01, \*\*\* p < .001* | | |

While the sample of violators was very small and caution must be advised when interpreting these findings, there were consistent trends in the analyses suggesting that in a sample of disordered gamblers, emotional dysregulation appears to be a key factor related to attempts to violate one's VSE agreement. Violators were more likely than non-violators to be motivated to gamble because of negative emotions or social pressure, were less satisfied with their personal relationships, had difficulty recognizing and coping with their negative emotions, and were less satisfied overall with their lives compared to non-violators. Future research should continue to explore these factors as they relate specifically to attempts to violate VSE agreements because they suggest that rather than being indicative of a more disordered gambling profile or an inability to control one's impulses or urges, what may be driving attempts to gamble while excluded comes down to a lack of strategies to cope with difficult emotions. This ideally would be addressed during counselling while enrolled in the VSE program; however, there is a need for future research to explore the extent to which violation patterns overlap with counselling or with specific barriers to accessing or participating in counselling.

## Diary Data Analyses

The following section of the report analyzes the data provided by participants through their weekly diaries. Upon receiving their consent form, participants who provided an email were sent a brief introduction to the diary study by one of the Principal Investigators along with an invitation to fill out the first week of the diary at the provided link using a provided code number. Those who completed the first weekly diary were subsequently sent one email each week with the next week's diary link and asked to please fill it in within the next few days again using the same provided code

number. This process repeated each week for a total of 12 weeks. If a participant did not fill out that weekly survey, they were sent an email the following week noting that they had not completed last week's diary but asking them to complete the current week if they were still interested in participating. Participants who missed more than two consecutive weeks were withdrawn from this part of the study. At the conclusion of their 12 weeks, participants were mailed a gift card pro-rated for the number of diary entries that they completed. Diaries were completed starting at the onset of recruitment in May 2019 and concluded by May 2020. As diary invitations were, at times, sent prior to the scheduling of the T1 interview, a total of 257 participants were emailed the invitation to complete the diary. In total, 76 (29.5 per cent) participants completed at least the first Week's diary. On average, participants completed 9.3 out of 12 diary entries.

Most weekly diaries were estimated to take between five to ten minutes to complete and primarily checked in on their emotional status, thoughts and urges to gamble, access to counseling and thoughts about future access to counseling, and quality of life. At the conclusion of each month (Weeks 4, 8 and 12), participants were sent a longer survey (approximately 15 minutes) that asked them about various measures, including the PGSI, the DASS-21, and the MSPSS.

Table 59 summarizes the key dimensions of the various scales used in the diaries. The *Number (#) of Scales* column refers to the number of aggregate scales included within the broader construct. For example, the nine items of the Problem Gambling Severity Index (PGSI) were aggregated to create a single index. In some instances, multiple subscales were created by aggregation. For example, the construct Multidimensional Support of Perceived Social Support is comprised of three subscales relating to Family, Peers, and Significant Others. In other cases, the construct items were not intended to be aggregated; that is, they do not produce an overall scale measure. These constructs have 0 scales. In these instances, analyses were conducted on each of the items only.

The *Number (#) of Items* column specifies the total of number of items that comprised the construct. In most cases where there were multiple scales, the items are equally divided among the scales. For example, there are seven items for each of the Depression, Anxiety, and Stress Scales. The sole exception is for the Positive and Negative Affect Scales. Here, the former has nine items, and the latter has seven. The *Items Points* column refers to the point scale used to measure each of the items. Past and Future Counseling were measured with Yes/No answers, while all the other items were evaluated using point values ranging from four to seven. The details for each point scale are provided for each construct in the sections below.

The longitudinal analyses conducted below required participants to have complete data; that is, for any given construct, participants had to have answered every question across all the time periods. The number of participants that met this criterion is presented in the *Valid N* column. For example, 38 participants answered all of the Quality of Life questions across each of the 12 weeks of the study. In general, constructs that were evaluated on a weekly basis tended to have fewer valid participants, while those constructs that were collected monthly produced a greater number of complete cases for analyses.

**TABLE 59: DESCRIPTIVE STATISTICS – DIARY CONSTRUCTS**

| Construct | # of Scales | # of Items | Items Points | Valid N | Time Periods |
|---|---|---|---|---|---|
| Problem Gambling Severity Index | 1 | 9 | 4 | 27 | 4 |
| Positive and Negative Affect Scales | 2 | 16 | 5 | 24 | 12 |
| Depression, Anxiety, and Stress Scales | 3 | 21 | 4 | 41 | 4 |
| Gambling Urge Scale | 1 | 6 | 7 | 49 | 4 |
| DSM-5 Level 1 Cross-Cutting Symptom Measure | 0 | 4 | 5 | 48 | 3 |
| Gambling Preoccupation Scale | 0 | 5 | 4 | 48 | 3 |
| Quality of Life | 0 | 7 | 5 | 38 | 12 |
| Multidimensional Scale of Perceived Social Support | 3 | 12 | 7 | 43 | 4 |
| Past Counseling | 0 | 9 | 2 | 25 | 12 |
| Future Counseling | 0 | 9 | 2 | 25 | 12 |

## PROBLEM GAMBLING SEVERITY INDEX

At the beginning of data collection, each participant was administered the PGSI. Following their initial enrollment, participants were asked at one-month intervals about the same behaviours, consequences, or feelings over the previous 30 days. The descriptive results for each of the nine PGSI items are displayed in Table 60. The *First Scale Score* indicates the average ranking for participants at the beginning of the study. For example, at the time of enrollment, for the question that asks, 'Have you bet more than you could really afford to lose', the average score was 1.85. This suggests that, on average, participants felt this way 'most of the time.' At enrollment, the average responses for all the items, with one exception, fell somewhere between 'sometimes' and 'most of the time.' The exception was the item related to 'Have you borrowed money or sold anything to get money to gamble', for which the mean response was between 'sometimes' and 'never.'

The *Last Scale Score* presents the average score for participants after three months. Every PGSI item experienced substantial reductions in behaviors, consequences, or feelings. With the one exception of 'have you felt you might have a gambling problem?', the average answer for items was 'never.' For six of the nine items, the reduction between the first and last scores was over 85%. Even the smallest decline, which was for the item 'has gambling caused you any health problems, including stress or anxiety', the reduction was about 45%. Simply put, over the course of the first three months, scores on the PGSI items were lowered markedly.

The final column of Table 60, *Coefficient*, provides an overall summary of the trajectory of participant scores over the study period. A positive coefficient suggests that, overall, the scores on that particular item became larger over time, while a negative coefficient indicates that the scores on the associated item became smaller. Not surprisingly, given the information presented in the *First Score* and *Last Score* columns, all the PSGI items evidenced negative coefficients. Because there were only four time periods, no attempt was made to evaluate the statistical significance of the coefficients.

**TABLE 60: DESCRIPTIVE STATISTICS – PGSI (N = 27)**

| In the past 12 months (W1) or 30 days (W2-4), how often … | First Scale Score | Last Scale Score | Coefficient |
|---|---|---|---|
| Have you bet more than you could really afford to lose | 1.85 | 0.19 | -0.131 |
| Have you needed to gamble with larger amounts of $ to get the same feeling | 1.33 | 0.15 | -0.091 |
| Did you go back another day to try and win back the money you lost | 1.52 | 0.04 | -0.117 |
| Have you borrowed money or sold anything to get money to gamble | 0.85 | 0.04 | -0.117 |
| Have you felt you might have a problem with gambling | 2.00 | 1.07 | -0.073 |
| Has gambling caused you any health problems, including stress or anxiety | 1.63 | 0.19 | -0.118 |
| Have people criticized your better or told you that you had a gambling problem, whether or not you thought it was true | 1.37 | 0.37 | -0.075 |
| Has your gambling caused any financial problems for you or your household | 1.67 | 0.22 | -0.123 |
| Have you felt guilty about the way you gamble or what happens when you gamble | 2.07 | 0.67 | -0.119 |

Although the overall trend of the PGSI items showed decline, the trajectories were not linear. The theme of monthly variability in responses will reoccur throughout the analyses of the diary data. Figure 11 provides a particularly apt illustration of what is meant here by variability. In Figure 11, each of the nine PGSI items have been summed to create a total scale of Problem Gambling Severity. It is immediately clear that the vast majority of the decline in PGSI scores occurred in the first month. From Month One to Month Two, the drop was barely noticeable, and from Months Two to Three, the average PGSI score was essentially flat.

**FIGURE 11: PGSI – AGGREGATE SCALE SCORE**
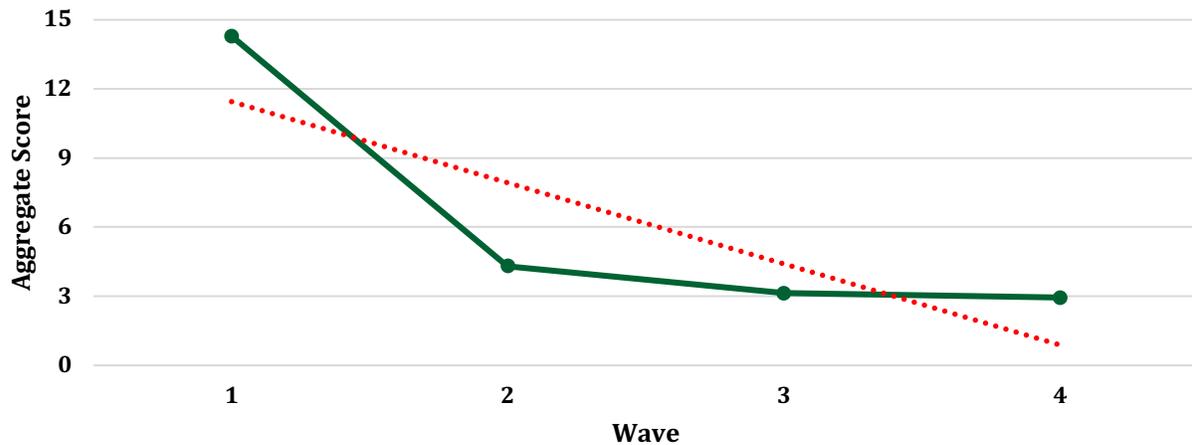


An empirical assessment of these comparative monthly differences is shown in Table 61 that demonstrates the results of a repeated measures ANOVA. The decrease in average aggregate scores from 14.29 to 4.30 over the first month was very large and significant ($F = 54.75$; $p < .001$). In contrast, the decreases that followed in Months Two and Three were negligible (F values close to 0) and insignificant.

**TABLE 61: PGSI – ANALYSIS OF CHANGE OVER TIME**

| Scale | Month | Average | Contrasts |
|---|---|---|---|
| | | | F |
| Aggregate PGSI | 0 | 14.29 | |
| | 1 | 4.30 | 54.75** |
| | 2 | 3.13 | 0.68 |
| | 3 | 2.94 | 0.33 |
| *p* < .05, ** *p* < .01 | | | |

## POSITIVE AND NEGATIVE AFFECT SCALES

It would be most appropriate to refer to the scales evaluated in this section of the report as *modified* Positive and Negative Affect Scales (PANAS), as some of the questions were drawn from the original PANAS, while others were added on the basis of perceived relevance. As the title suggests, the modified PANAS asks a variety of questions related to the emotional states of participants rated on several dimensions about how they are feeling on a 5-point Likert scale anchored by 'not at all' and 'extremely'. The two overall scales and their constituent items are presented in Table 62. With one exception, the scales and all their components showed coefficient signs consistent with expectations. Specifically, aside from 'Relieved', Total Positive Affect and each of the items revealed an increase over the 12 weeks of data collection. In effect, emotional well-being improved. Conversely, the trajectories for Total Negative Affect and each of their items declined. Put another way, negative emotions were reduced. As the PANAS was asked once per week, it was possible to do significance testing on the regression coefficients. The increase in Positive Affect and decrease in Negative Affects were both statistically significant ($p < .001$).

**TABLE 62: DESCRIPTIVE STATISTICS – PANAS (N = 24)**

| Scales and Items | First Scale Score | Last Scale Score | Coefficient |
|---|---|---|---|
| *Positive Affect* | 29.38 | 31.29 | 0.212** |
| Active | 3.04 | 3.50 | 0.038* |
| Determined | 3.46 | 3.88 | 0.028* |
| Attentive | 3.58 | 3.63 | 0.015 |
| Inspired | 3.04 | 3.50 | 0.035* |
| Alert | 3.33 | 3.33 | 0.008 |
| Happy | 3.25 | 3.42 | 0.024* |
| Relieved | 3.58 | 3.29 | -0.013 |
| Confident | 3.33 | 3.46 | 0.042* |
| Satisfied | 2.92 | 3.29 | 0.036* |
| | First Scale Score | Last Scale Score | Coefficient |
| *Negative Affect* | 14.33 | 12.63 | -0.227** |
| Afraid | 2.00 | 1.88 | -0.006 |
| Nervous | 2.21 | 1.79 | -0.031* |
| Upset | 1.88 | 1.96 | -0.020 |
| Hostile | 1.46 | 1.33 | -0.016* |
| Ashamed | 2.29 | 1.96 | -0.057* |
| Confused | 1.75 | 1.67 | -0.016 |
| Regretful | 2.75 | 1.88 | -0.081* |

The variability in the longitudinal trends for Positive and Negative Affect presented in Figures 12 and 13 was not nearly as pronounced as that exhibited by the PGSI; nor was it as consistent. The only pattern that could be identified was one that swung up and down in two- or three-week intervals. Interestingly, the first week of enrollment was marked by the worsening of affective states as Positive Affect scores went down, and Negative Affect scores went up. This may be indicative of the emotional struggles participants feel while withdrawing from problem gambling behaviours. Both improved in the subsequent two-week period, but fluctuated thereafter.

**FIGURE 12: POSITIVE AFFECT SCALE – AVERAGE SCORES ACROSS 12 WEEKS**
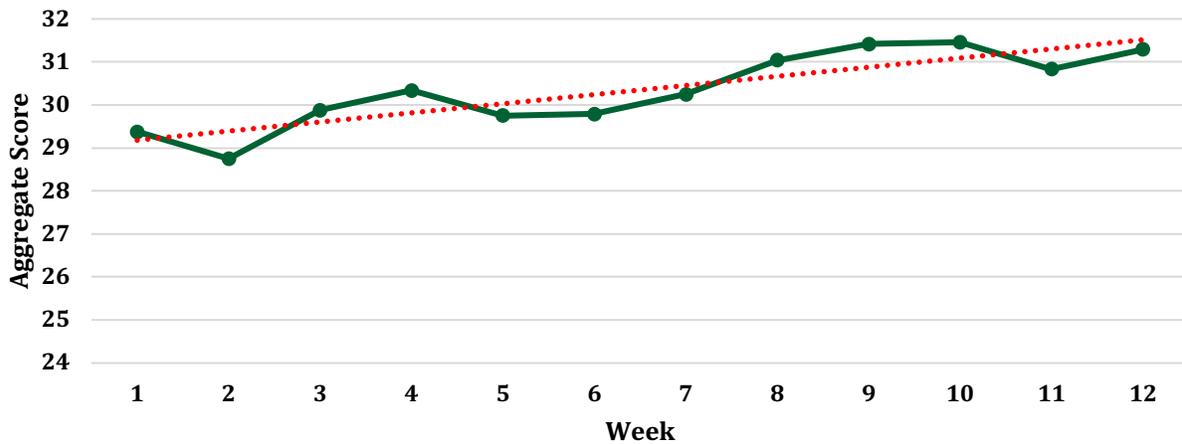


**FIGURE 13: NEGATIVE AFFECT SCALE – AVERAGE SCORES ACROSS 12 WEEKS**
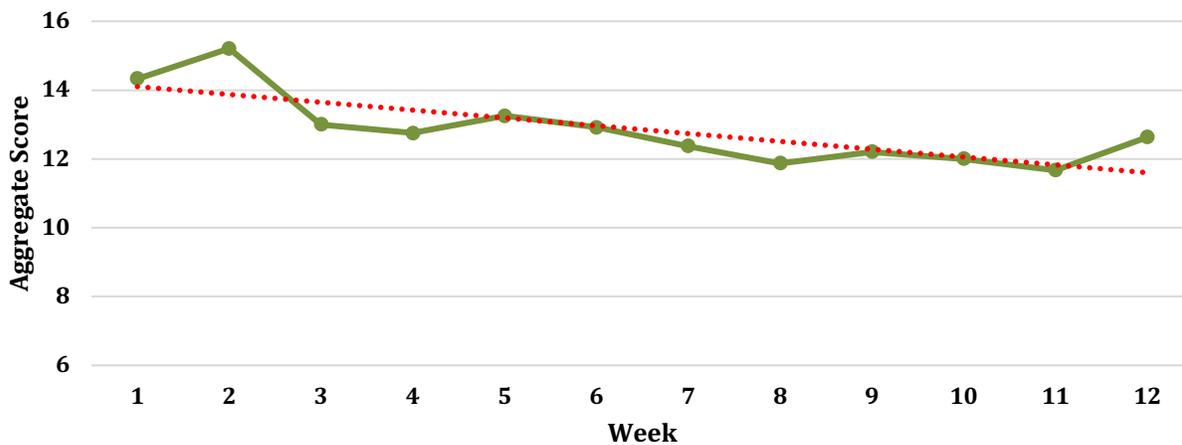


For the repeated measures ANOVA analysis represented in Table 63, the weekly measures were aggregated over months. Overall, most of the change over these waves was statistically insignificant. However, Positive Affect did increase significantly over the final month of the study ($F$ = 4.63; $p < .05$), while there was also a significant drop in Negative Affect between Months One and Two ($F$ = 5.75; $p < .05$). In contrast to the findings for PGSI, there was no particular pattern to the longitudinal patterns of affect.

**TABLE 63: PANAS – ANALYSIS OF CHANGE OVER TIME**

| Scales | Month | Average | Contrasts |
|---|---|---|---|
| | | | F |
| Positive Affect | 0 | 29.38 | |
| | 1 | 29.65 | 0.07 |
| | 2 | 30.21 | 1.69 |
| | 3 | 31.25 | 4.63* |
| Negative Affect | 0 | 14.33 | |
| | 1 | 13.65 | 1.07 |
| | 2 | 12.60 | 5.74* |
| | 3 | 12.13 | 1.14 |
| *p < .05 | | | |

## DEPRESSION, ANXIETY, AND STRESS SCALES

As discussed above, the Depression, Anxiety, and Stress Scales (DASS-21) are comprised of seven items, each measured on a 4-point Likert scale anchored by 'never' and 'almost always'. The values of scale items displayed in Table 64 suggest comparatively low levels of Depression, Anxiety, and Stress among participants. Few of the items even average a response of 'sometimes.' The scales themselves represent aggregations of these seven items. As portrayed by the negative coefficients in Table 63, Depression, Anxiety, and Stress each decreased over the study period. Consistent with the trends noted in the above analyses, the steepest decline occurred for Depression (its coefficient of -0.117 was 40% larger than that of Anxiety), while Stress demonstrated the lowest level of change. The drops were quite consistent for the constituent items as well as only one Anxiety item 'was aware of dryness in mouth' and two Stress items 'felt like I was using a lot of nervous energy' and 'found it difficult to relax' showed increases over the three months.

**TABLE 64: DESCRIPTIVE STATISTICS – DASS-21 (N = 41)**

| Scales and Items | First Scale Score | Last Scale Score | Coefficient |
|---|---|---|---|
| *Depression* | | | *-0.117* |
| Couldn't seem to experience any positive feeling at all | 0.76 | 0.66 | -0.012 |
| Found it difficult to work up initiative to do things | 1.00 | 1.00 | 0.000 |
| Felt I had nothing to look forward to | 0.68 | 0.71 | -0.000 |
| Felt down-hearted and blue | 0.95 | 0.83 | -0.010 |
| Was unable to become enthusiastic about anything | 0.85 | 0.76 | -0.009 |
| Felt I wasn't worth much as a person | 0.66 | 0.54 | -0.016 |
| Felt that life was meaningless | 0.44 | 0.34 | -0.011 |
| | | | |
| *Anxiety* | | | *-0.070* |
| Was aware of dryness in mouth | 0.54 | 0.54 | 0.003 |
| Experienced breathing difficulty | 0.22 | 0.20 | -0.001 |
| Experienced trembling (e.g. in hands) | 0.17 | 0.17 | -0.000 |
| Worried about situations in which I might panic and make a fool of myself | 0.46 | 0.41 | -0.006 |
| Felt I was to panic | 0.51 | 0.34 | -0.013 |
| Was aware of the action of my heart in the absence of physical exertion | 0.54 | 0.32 | -0.016 |
| Felt scared without any good reason | 0.49 | 0.41 | -0.002 |
| | | | |
| *Stress* | | | *-0.034* |
| Found it hard to wind down | 1.07 | 0.98 | -0.009 |
| Tended to over-react to situations | 0.98 | 0.83 | -0.017 |
| Felt I was using a lot of nervous energy | 0.66 | 0.61 | 0.002 |
| Found myself getting agitated | 0.88 | 0.80 | -0.005 |
| Found it difficult to relax | 1.02 | 0.95 | 0.002 |
| Was intolerant of anything that kept me from getting on with what I was doing | 0.59 | 0.73 | 0.018 |
| Felt I was rather touchy | 0.95 | 0.85 | -0.006 |

As illustrated in Figures 15 and 16, the patterns of change for Anxiety and Stress were essentially the same as both decreased in the first month of enrollment followed by increases in Month Two and decreases again in Month Three. By the end of the three-month period, participants, on average, reported having slightly less Anxiety and Stress than when they first enrolled in the VSE program. The trend in Depression, highlighted in Figure 14, was somewhat different. Like the case with the Affect scales, depression rose during the first month of the study then dropped by more than it had risen during the second month, and continued the fall, albeit as a slower rate, in the final month.

**FIGURE 14: DEPRESSION SCALE – AVERAGE SCORES ACROSS 4 WAVES**
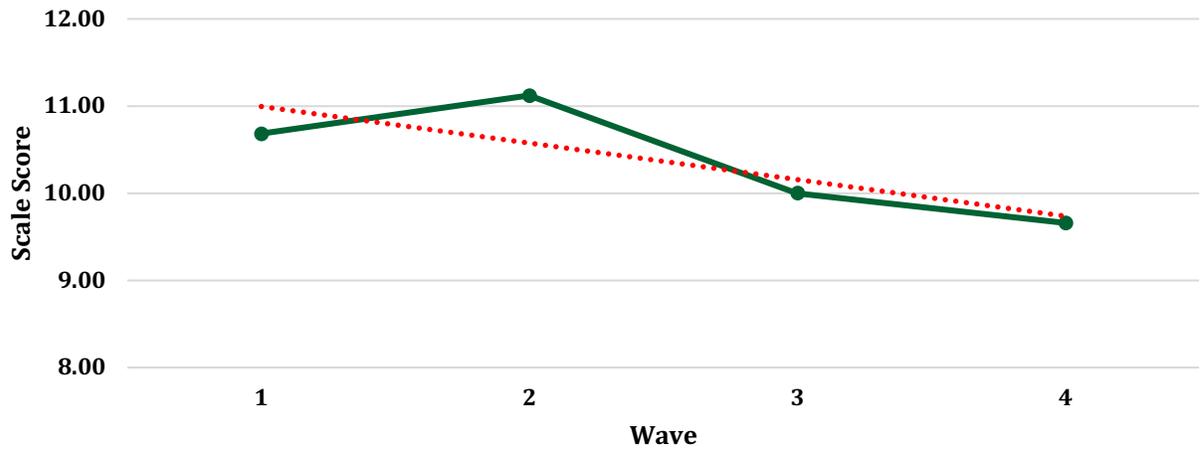


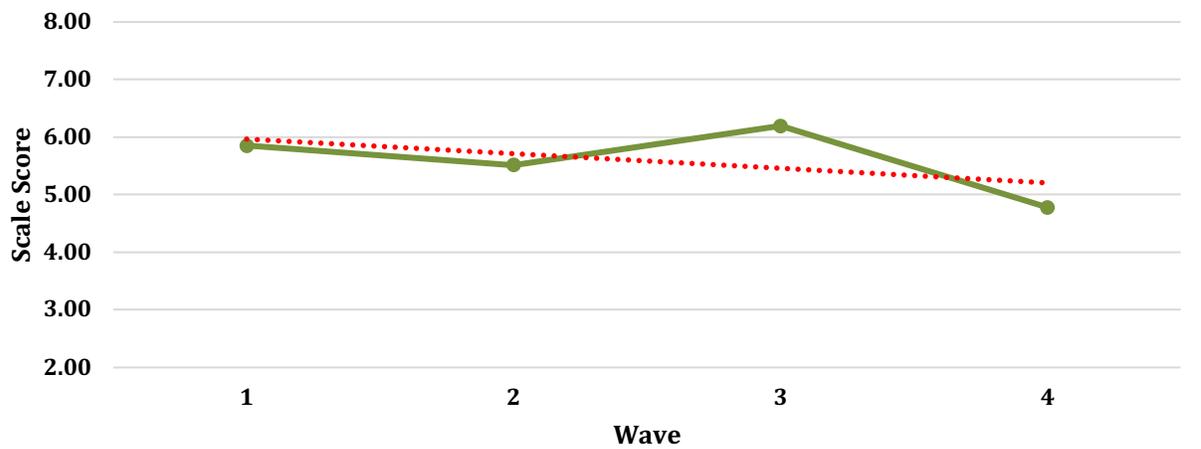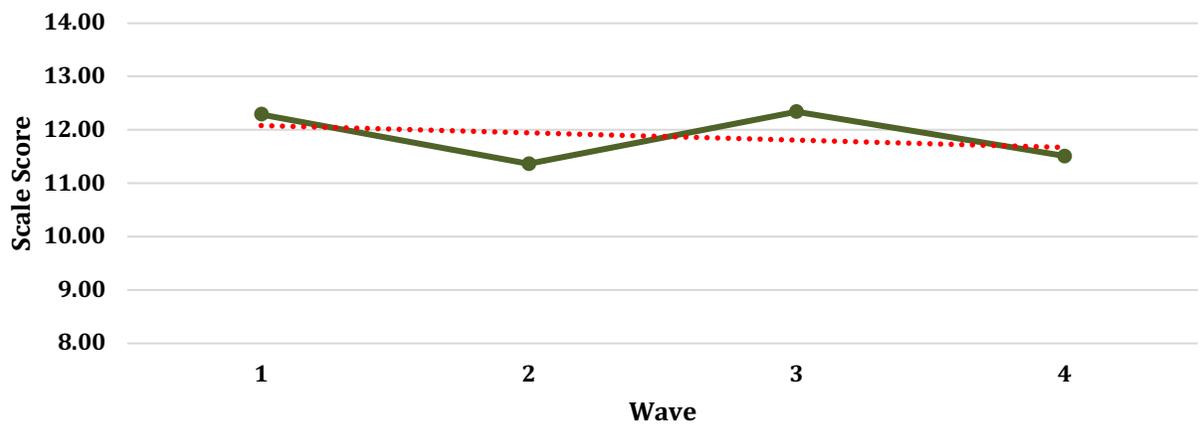**FIGURE 15: ANXIETY SCALE – AVERAGE SCORES ACROSS 4 WAVES**



**FIGURE 16: STRESS SCALE – AVERAGE SCORES ACROSS 4 WAVES**

Only one of the repeated measures ANOVA analyses was statistically significant (see Table 65). Specifically, the drop in average Anxiety levels between Months Two and Three ($F$ = 4.78; $p$ < .05). None of the other changes approached significance. As was the case with the PANAS, the patterns of change for the DASS-21 were essentially minor fluctuations around a gradually decreasing trendline.

**TABLE 65: DASS-21 ANALYSIS OF CHANGE OVER TIME**

| | Month | Average | Contrasts |
|---|---|---|---|
| **Scales** | | | **F** |
| **Depression** | 0 | 10.68 | |
| | 1 | 11.12 | 0.19 |
| | 2 | 10.00 | 1.06 |
| | 3 | 9.66 | 0.13 |
| **Anxiety** | 0 | 5.85 | |
| | 1 | 5.51 | 0.16 |
| | 2 | 6.20 | 1.02 |
| | 3 | 4.78 | 4.93* |
| **Stress** | 0 | 12.29 | |
| | 1 | 11.37 | 0.71 |
| | 2 | 12.34 | 1.08 |
| | 3 | 11.51 | 0.93 |
| *$p$ < .05 | | | |

### GAMBLING URGE SCALE

For the Gambling Urge Scale (Raylu & Oei, 2004), participants were asked to indicate how much they agreed or disagreed with six questions. The responses were provided on a 7-point Likert scale anchored by 'strongly disagree' and 'strongly agree'. At the time of enrollment, for the most part, participants 'moderately' or 'mildly' disagreed with the Gambling Urge indicators. By the end of the third month, the level of disagreement had gotten stronger. In effect, the participants did not, on average, note strong urges to gamble, and those urges were reduced even more throughout the enrollment period.

In comparison with some on other scales, the results of the analyses for the GUS were much more definitive (see Table 66). Each of the Gambling Urge indicators fell between 25% and 35% from the *First Score* to the *Last Score*. The Total GUS score dropped by 30%. Figure 17 indicates that the largest decline in GUS occurred in the final month. This is confirmed in Table 67 ($F$ = 9.42; $p$ < .05). Overall, it is fair to conclude that GUS scores decreased in a roughly linear pattern over the course of the study period.

**TABLE 66: DESCRIPTIVE STATISTICS – GUS (N = 49)**

| Scales and Items | First Scale Score | Last Scale Score | Coefficient |
|---|---|---|---|
| *GUS* | | | -0.403 |
| All I want to do right now is gamble | 2.82 | 1.84 | -0.081 |
| It would be difficult to turn down an opportunity to gamble this minute | 3.45 | 2.49 | -0.080 |
| Gambling right now would make things seem just perfect | 2.43 | 1.80 | -0.055 |
| I want to gamble so badly that I can almost feel it | 2.10 | 1.47 | -0.053 |
| Nothing would be better than gambling right now | 2.14 | 1.59 | -0.048 |
| I crave gambling right now | 2.84 | 1.86 | -0.086 |

**FIGURE 17: GUS SCALE – AVERAGE SCORES ACROSS 4 WAVES**
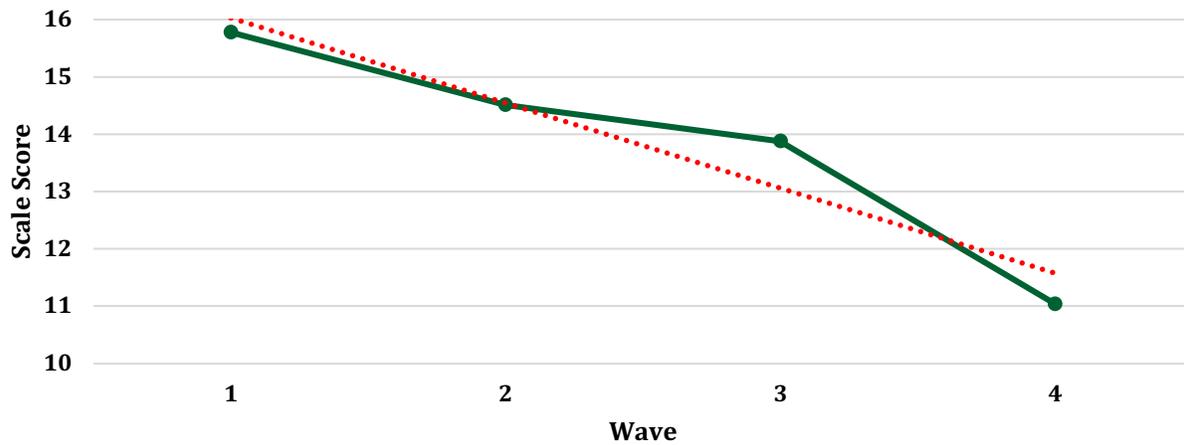


**TABLE 67: GUS – ANALYSIS OF CHANGE OVER TIME**

| | Month | Average | Contrasts |
|---|---|---|---|
| **Scales** | | | **F** |
| GUS | 0 | 15.78 | |
| | 1 | 14.51 | 1.82 |
| | 2 | 13.88 | 0.38 |
| | 3 | 11.04 | 9.42* |
| *p < .05 | | | |

## DSM-5 SELF-RATED LEVEL 1 CROSS-CUTTING SYMPTOM MEASURE

Four questions from the DSM-5 (American Psychiatric Association, 2013) were used to measure sleep patterns and substance use/abuse in the preceding seven days. Participants were not asked the DSM-5 questions upon enrollment but were asked at the end of the first, second, and third

months. Responses were evaluated on a 5-point Likert scale anchored by 'never or not at all' and 'severe – every day or nearly every day'. The items were not aggregated into a scale; instead, the items were analyzed individually. Table 68 indicates that only problems with sleep rose higher than the level of 'slightly'. In general, participants did not indicate that any of the DSM-5 items occurred on a frequent basis. Moreover, problems with sleep, smoking, and the nonprescribed use or overuse of medicines/drugs decreased over the course of the study. Conversely, substantial alcohol use showed a very small increase. The very small size of the coefficients is confirmed through the trajectories illustrated in Figures 18 to 21. Here, the trends were basically flat. Statistically, the data presented in Table 69 suggests that there were no notable changes from month to month in any of these items.

**TABLE 68: DESCRIPTIVE STATISTICS – DSM (N = 48)**

| Items | First Scale Score | Last Scale Score | Coefficient |
|---|---|---|---|
| *In the past 7 days, how often have you ...* | | | |
| Had problems with sleep that affected your overall sleep quality | 1.60 | 1.52 | -0.010 |
| Consumed at least 4 drinks of any kind of alcohol in a single day | 0.69 | 0.71 | 0.003 |
| Smoked cigarettes, cigar, pipe, or used snuff or chewing tobacco | 0.90 | 0.75 | -0.018 |
| Used any medicines on your own, without prescription, or in greater amounts than prescribed | 0.38 | 0.21 | -0.021 |
| *\* p < .05* | | | |

**FIGURE 18: PROBLEM WITH SLEEP – AVERAGE SCORES ACROSS 3 WAVES**
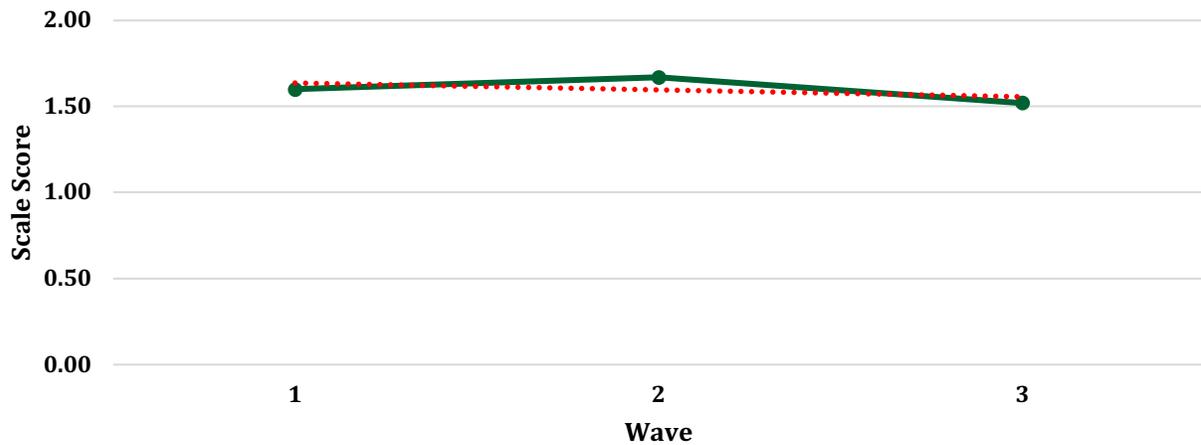
**FIGURE 19: CONSUMED AT LEAST 4 DRINKS – AVERAGE SCORES ACROSS 3 WAVES**
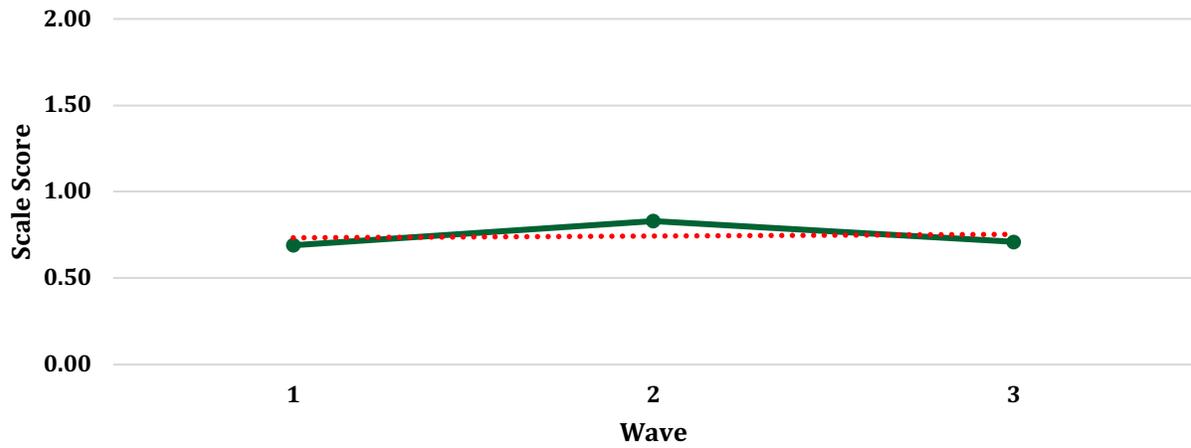


**FIGURE 20: SMOKED – AVERAGE SCORES ACROSS 3 WAVES**
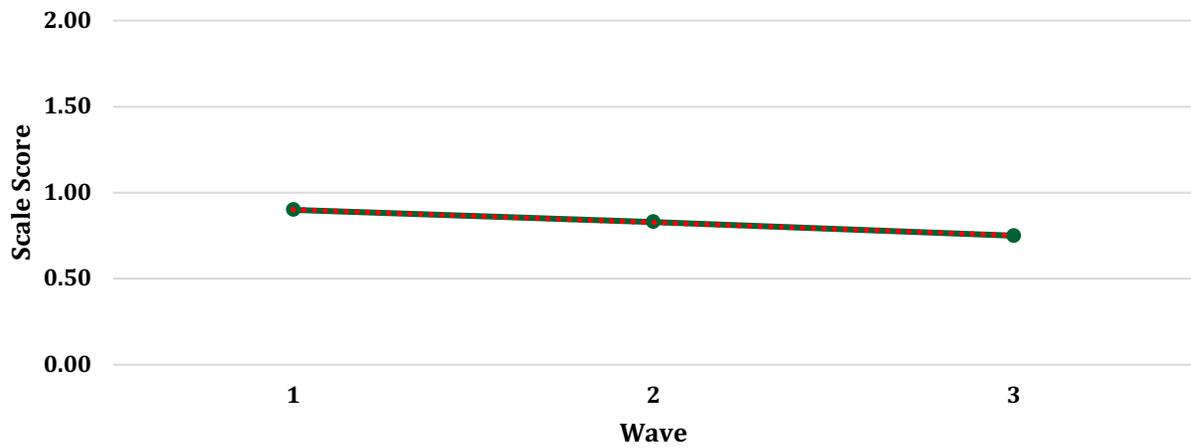


**FIGURE 21: OVERUSED MEDICATION/DRUGS – AVERAGE SCORES ACROSS 3 WAVES**
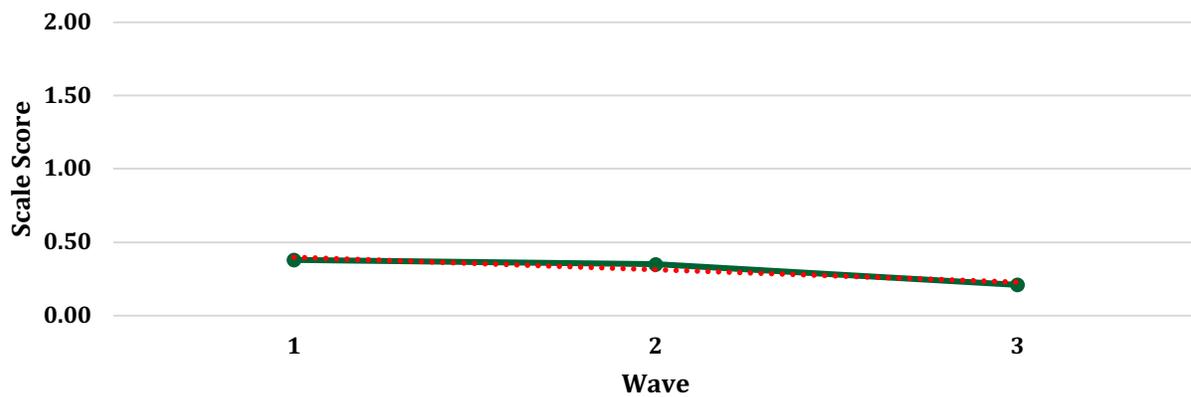
**TABLE 69: DSM – ANALYSIS OF CHANGE OVER TIME**

| | Month | Average | Contrasts |
|---|---|---|---|
| **Items** | | | **F** |
| **Had problems with sleep that affected your overall sleep quality** | 0 | 1.60 | |
| | 1 | 1.67 | 0.18 |
| | 2 | 1.52 | 0.96 |
| **Consumed at least 4 drinks of any kind of alcohol in a single day** | 0 | 0.69 | |
| | 1 | 0.83 | 1.26 |
| | 2 | 0.71 | 1.00 |
| **Smoked cigarettes, cigar, pipe, or used snuff or chewing tobacco** | 0 | 0.90 | |
| | 1 | 0.83 | 0.19 |
| | 2 | 0.75 | 0.66 |
| **Used any medicines on your own, without prescription, or in greater amounts than prescribed** | 0 | 0.38 | |
| | 1 | 0.35 | 0.08 |
| | 2 | 0.21 | 2.18 |
| *\* p < .05* | | | |

## GAMBLING PREOCCUPATION SCALE

As previously described, the Gambling Preoccupation Scale (GPS) created by the authors of this report contains five items that inquire about various aspects of feelings towards gambling over the previous seven days. Participants were asked to about frequency of specific thoughts or urges on a 4-point Likert scale anchored by 'none of the time' and 'all the time'. The coefficients presented in Table 70 showed some variation across questions. At the lower end of the spectrum, at enrollment, participants revealed quite low levels of 'experiencing the urge to gamble'. They similarly did not, on average, think about gambling or about how it felt when they were gambling even 'some of the time.' But participants did think about the consequences of gambling more than 'some of the time.' All these scores, which were already low, were reduced further during the three-month study period.

Slightly more concerning were the responses to the question about the participant's ability to control the urge to gamble. At enrollment, the average response was between 'most of the time' and 'all of the time.' But, by the end for study period, the ability to control this urge decreased somewhat from 2.41 to 2.19. According to the repeated measures ANOVA results presented in Table 71, the overall decrease was attributable to a drop during the first time period ($F$ = 4.68; $p < .05$). In the second time period, the ability to control the urge to gamble improved slightly. Table 70 identifies two other notable periods of change. First, 'thinking about the consequences of gambling' decreased significantly from Month One to Month Two ($F$ = 6.41; $p < .05$). Second, "experiencing the urge to gamble decreased significantly from Month Two to Month Three ($F$ = 6.13; $p < .05$). In short, the pattern of responses for the GPS items might best be characterized as inconsistent.

**TABLE 70: DESCRIPTIVE STATISTICS – GPS (N = 48)**

| Items | First Scale Score | Last Scale Score | Coefficient |
|---|---|---|---|
| *In the past 7 days, how often did you/were you able to ...* | | | |
| Think about gambling | 0.94 | 0.90 | -0.005 |
| Think about consequences of gambling | 1.33 | 1.02 | -0.039 |
| Think about how it feels when you're gambling | 0.79 | 0.71 | -0.010 |
| Experience the urge to gamble | 0.67 | 0.50 | -0.021 |
| Able to control the urge to gamble | 2.41 | 2.19 | -0.028 |

**FIGURE 22: THINK ABOUT GAMBLING – AVERAGE SCORES ACROSS 3 WAVES**
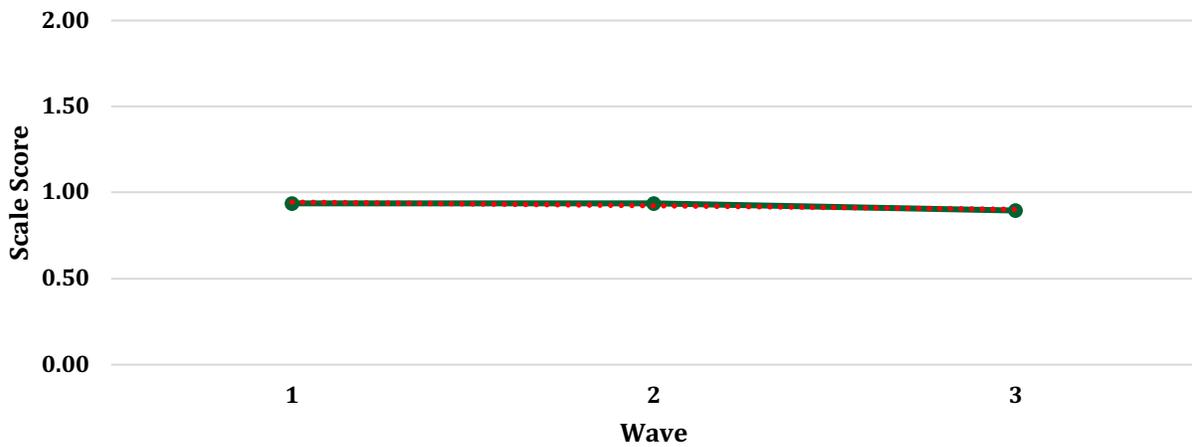


**FIGURE 23: THINK ABOUT CONSEQUENCES OF GAMBLING – AVERAGE SCORES ACROSS 3 WAVES**
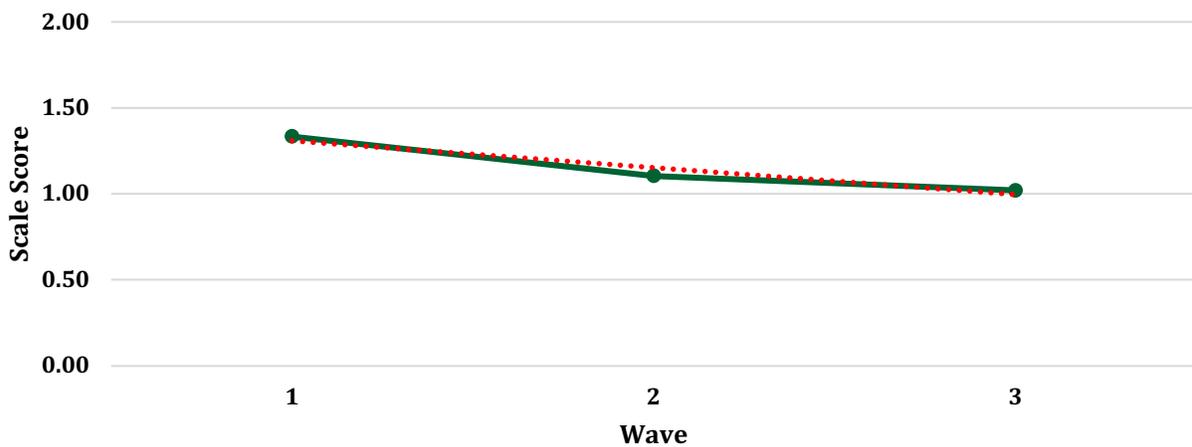
**FIGURE 24: THINK ABOUT HOW IT FEELS WHEN YOU'RE GAMBLING – AVERAGE SCORES ACROSS 3 WAVES**
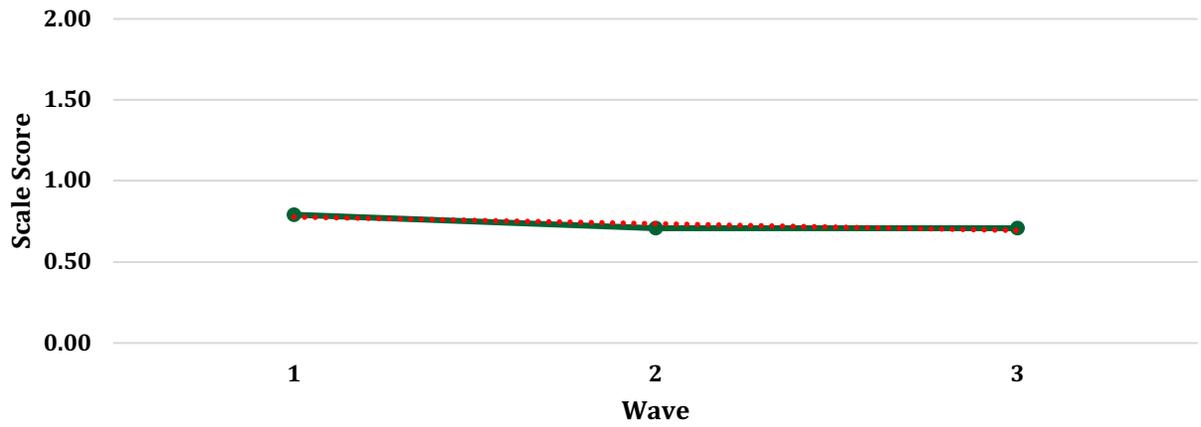


**FIGURE 25: EXPERIENCE THE URGE TO GAMBLE – AVERAGE SCORES ACROSS 3 WAVES**
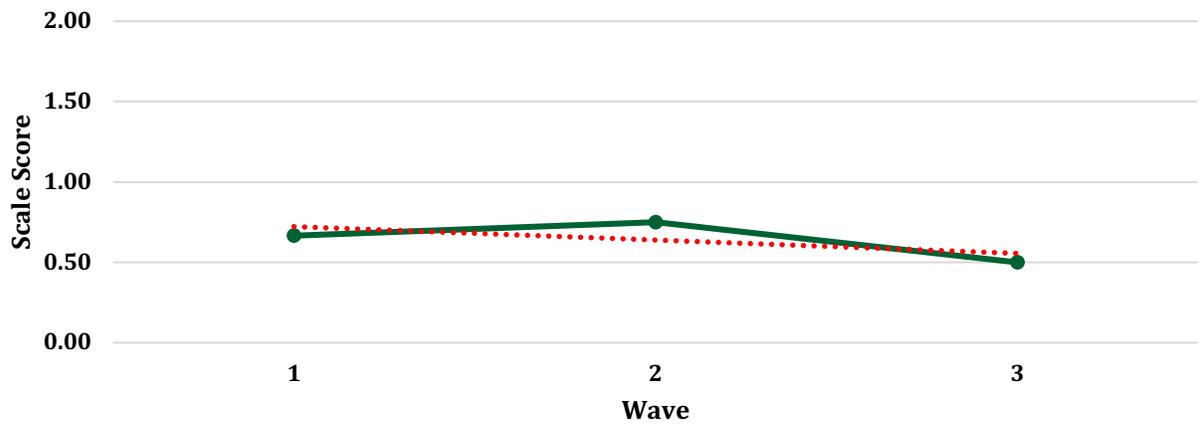


**FIGURE 26: ABLE TO CONTROL THE URGE TO GAMBLE – AVERAGE SCORES ACROSS 3 WAVES**
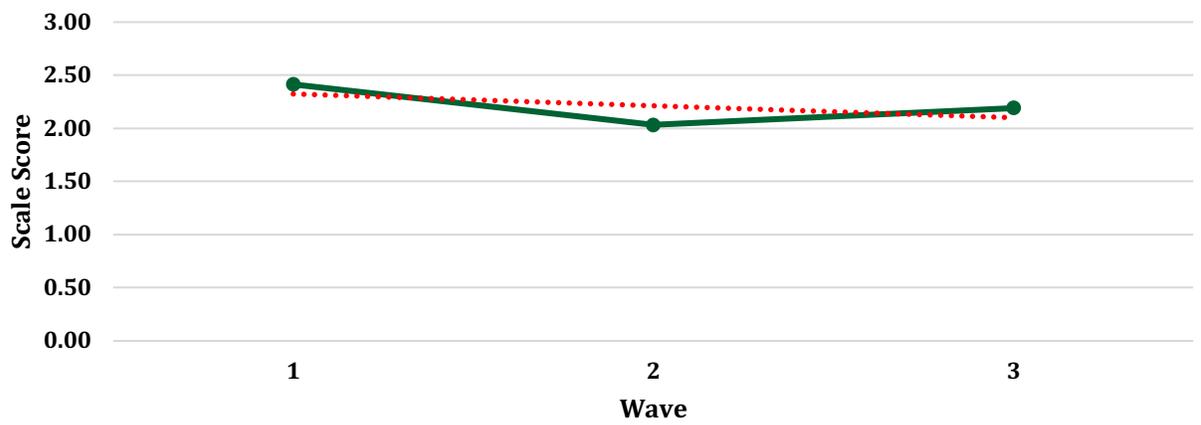
**TABLE 71: GPS – ANALYSIS OF CHANGE OVER TIME**

| Items | Month | Average | Contrasts |
|---|---|---|---|
| | | | F |
| Think about gambling | 1 | 0.94 | |
| | 2 | 0.94 | 0.00 |
| | 3 | 0.90 | 0.28 |
| Think about consequences of gambling | 1 | 1.33 | |
| | 2 | 1.10 | 6.41* |
| | 3 | 1.02 | 0.89 |
| Think about how it feels when you're gambling | 1 | 0.79 | |
| | 2 | 0.71 | 0.66 |
| | 3 | 0.71 | 0.00 |
| Experience the urge to gamble | 1 | 0.67 | |
| | 2 | 0.75 | 0.89 |
| | 3 | 0.50 | 6.13* |
| Able to control the urge to gamble | 1 | 2.41 | |
| | 2 | 2.03 | 4.68* |
| | 3 | 2.19 | 1.64 |
| *$p < .05$ | | | |

## QUALITY OF LIFE

Participants were asked every week about their level of satisfaction across six key dimensions, as well as about their overall satisfaction with life. Responses were assessed on a 5-point Likert scale anchored by 'very dissatisfied' and 'very satisfied'. As presented in Table 72, participants were, in general, 'dissatisfied' or 'neutral' about their quality of life. They were most satisfied with their relationships with family members and peers, and were least satisfied with their finances. As demonstrated by the positive coefficients, all but one of the Quality of Life indicators improved over the three month study period. However, only two of those increases, namely 'relationship with family' and 'finances' were statistically significant. Of note, these are areas where participants had also self-identified benefits of participating in the VSE program suggesting that these items were contributing to positive outcomes because of the VSE program.

**TABLE 72: DESCRIPTIVE STATISTICS – LQ (N = 38)**

| Items | First Scale Score | Last Scale Score | Coefficient |
|---|---|---|---|
| *Satisfaction Today with ...* | | | |
| Personal Health | 2.87 | 2.92 | 0.000 |
| Energy Levels | 2.63 | 2.89 | 0.013 |
| Self | 3.16 | 3.08 | 0.000 |
| Relationship with Family | 3.53 | 3.74 | 0.016* |
| Relationship with Peers | 3.63 | 3.66 | -0.002 |
| Finances | 2.50 | 2.71 | 0.020* |
| Life Overall | 3.18 | 3.29 | 0.010 |
| *p < .05 | | | |

Figures 27 to 33 illustrate patterns of change that are remarkably stable. In effect, there were only minor fluctuations against essentially linear growth. This reality was confirmed by the repeated measures ANOVA results presented in Table 73 that displayed no significant period change across any of the indicators.

**FIGURE 27: PERSONAL HEALTH – AVERAGE SCORES ACROSS 12 WEEKS**
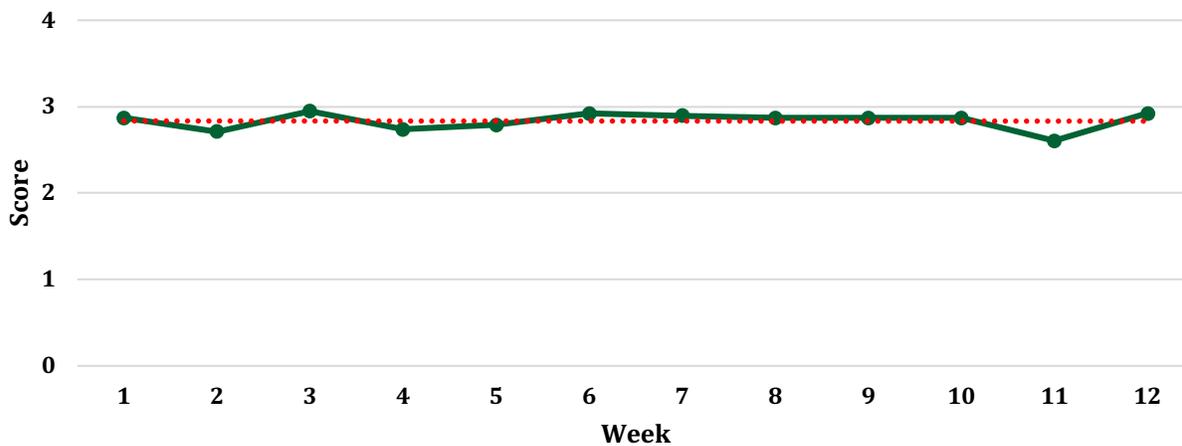
**FIGURE 28: ENERGY LEVELS – AVERAGE SCORES ACROSS 12 WEEKS**
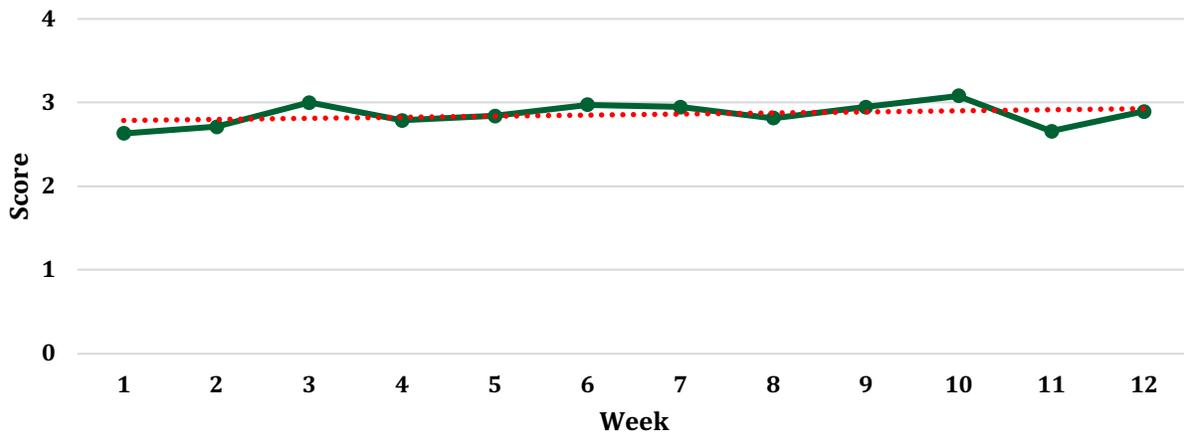


**FIGURE 29: SELF – AVERAGE SCORES ACROSS 12 WEEKS**
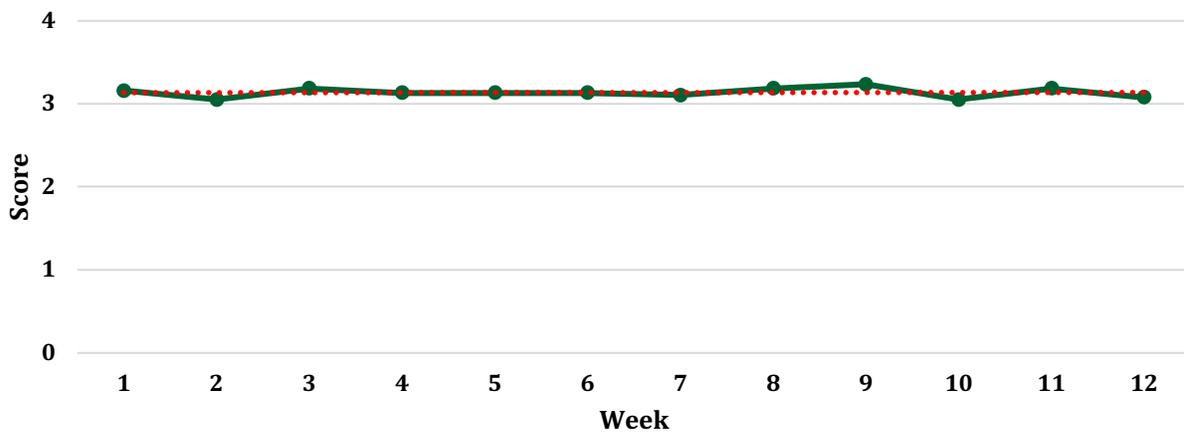


**FIGURE 30: RELATIONSHIP WITH FAMILY – AVERAGE SCORES ACROSS 12 WEEKS**
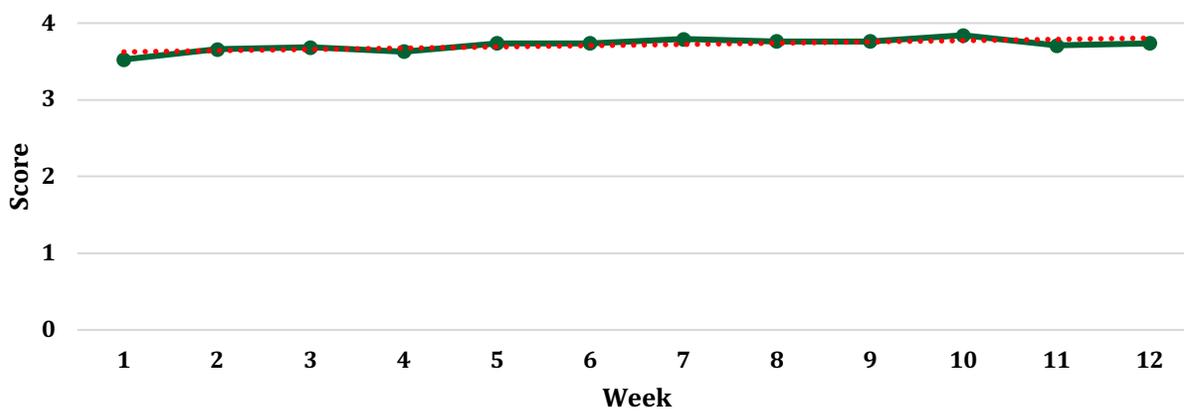
**FIGURE 31: RELATIONSHIP WITH PEERS – AVERAGE SCORES ACROSS 12 WEEKS**
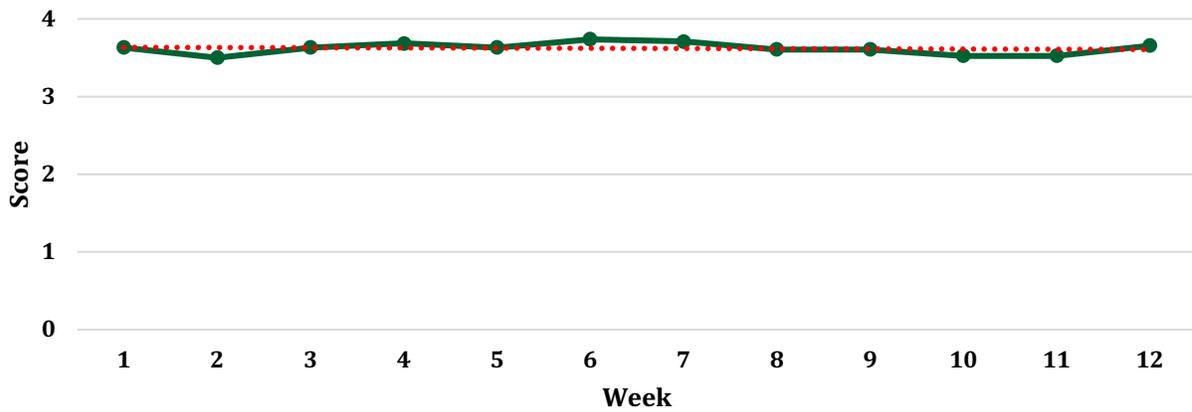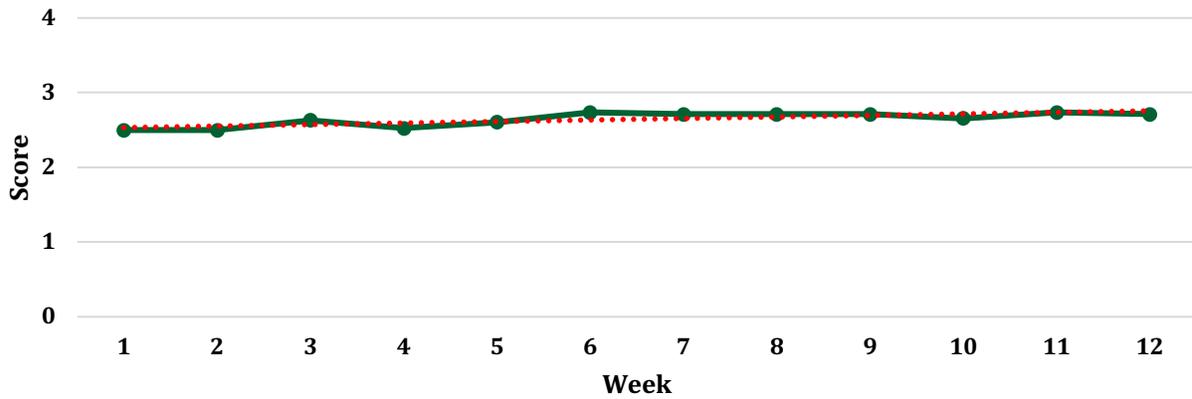
**FIGURE 32: FINANCES – AVERAGE SCORES ACROSS 12 WEEKS**
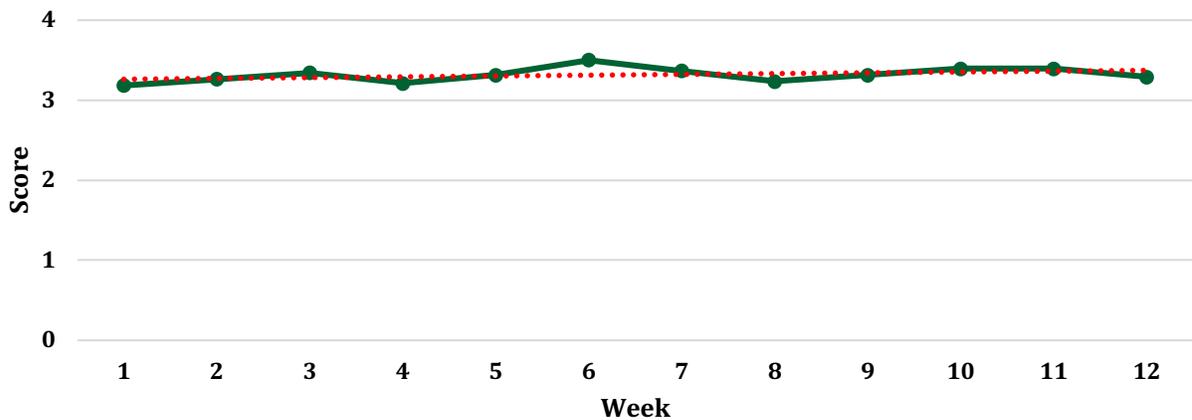
**FIGURE 33: LIFE OVERALL – AVERAGE SCORES ACROSS 12 WEEKS**

**TABLE 73: LQ – ANALYSIS OF CHANGE OVER TIME**

| Scales | Month | Average | Contrasts F |
|---|---|---|---|
| **Personal Health** | 0 | 2.87 | |
| | 1 | 2.80 | 0.31 |
| | 2 | 2.87 | 0.61 |
| | 3 | 2.82 | 0.44 |
| **Energy Levels** | 0 | 2.63 | |
| | 1 | 2.83 | 2.78 |
| | 2 | 2.89 | 0.60 |
| | 3 | 2.89 | 0.00 |
| **Self** | 0 | 3.16 | |
| | 1 | 3.12 | 0.13 |
| | 2 | 3.14 | 0.05 |
| | 3 | 3.14 | 0.00 |
| **Relationship with Family** | 0 | 3.53 | |
| | 1 | 3.66 | 1.36 |
| | 2 | 3.76 | 2.00 |
| | 3 | 3.76 | 0.01 |
| **Relationship with Peers** | 0 | 3.63 | |
| | 1 | 3.61 | 0.08 |
| | 2 | 3.67 | 0.93 |
| | 3 | 3.58 | 2.69 |
| **Finances** | 0 | 2.50 | |
| | 1 | 2.55 | 0.35 |
| | 2 | 2.69 | 3.43 |
| | 3 | 2.70 | 0.03 |
| **Life Overall** | 0 | 3.18 | |
| | 1 | 3.27 | 0.76 |
| | 2 | 3.36 | 2.71 |
| | 3 | 3.35 | 0.01 |
| *$p < .05$ | | | |

## MULTIDIMENSION SCALE OF PERCEIVED SOCIAL SUPPORT

The Multidimensional Scale of Perceived Social Support (MSPSS) consists of three primary scales, each of which is an additive composite of four items. Like the Gambling Urge Scale, participants were asked to indicate how much they agreed or disagreed with twelve questions. The responses were recorded on a 7-point Likert scale anchored by 'very strongly disagree' and 'very strongly agree'. As indicated by the *First* and *Last Scores* shown in Table 74, participants tended to characterize their levels of perceived social support in mildly positive terms. The largest effect was noted for 'family' (Coefficient = 0.088). The family scale also showed the greatest consistency across

items, each of which solicited higher levels of agreement over time. The coefficient for 'significant others' was also positive, but was substantially smaller (0.025). Conversely, the coefficient for 'peers' was negative suggesting the perceptions of peer support got marginally worse over the study period. The specific item scores reveal a curious mix of positive and negative items.

**TABLE 74: DESCRIPTIVE STATISTICS – MSPSS (N = 43)**

| Scales and Items | First Scale Score | Last Scale Score | Coefficient |
|---|---|---|---|
| *Family* | | | 0.088 |
| My family really tries to help me | 5.14 | 5.23 | 0.005 |
| I get the emotional help and support I need from my family | 4.98 | 5.16 | 0.017 |
| I can talk about my problems with my family | 4.74 | 5.47 | 0.055 |
| My family is willing to help me make decisions | 5.09 | 5.16 | 0.011 |
| | | | |
| *Friends* | | | -0.033 |
| My friends really try to help me | 4.63 | 4.72 | 0.014 |
| I can count on my friends when things go wrong | 4.91 | 4.63 | -0.027 |
| I have friends with whom I can share my joys and sorrows | 5.14 | 5.12 | -0.003 |
| I can talk about my problems with my friends | 5.00 | 4.72 | -0.016 |
| | | | |
| *Significant Others* | | | 0.025 |
| There is a special person who is around when I am in need | 5.33 | 5.47 | 0.017 |
| There is a special person with whom I can share my joys and sorrows | 5.58 | 5.42 | -0.015 |
| I have a special person who is a real source of comfort to me | 5.30 | 5.40 | 0.005 |
| There is a special person in my life who cares about my feelings | 5.51 | 5.67 | 0.018 |

The trend lines associated with the MSPSS scale displayed unique patterns. As anticipated, 'family' showed a definitive positive trajectory indicating increasing perceptions of support (see Figure 34). On the other hand, the overall trajectory for 'friends' was negative having dropped across the first and third waves (see Figure 35). Finally, while the overall trajectory for 'significant others' was positive, this obscured a more complex pattern. Perceptions of social support by significant others declined between Month One and Two and it was only in subsequent periods, especially between Months Two and Three, that it rose. As shown in Table 75, none of the month-over-month changes were statistically significant.
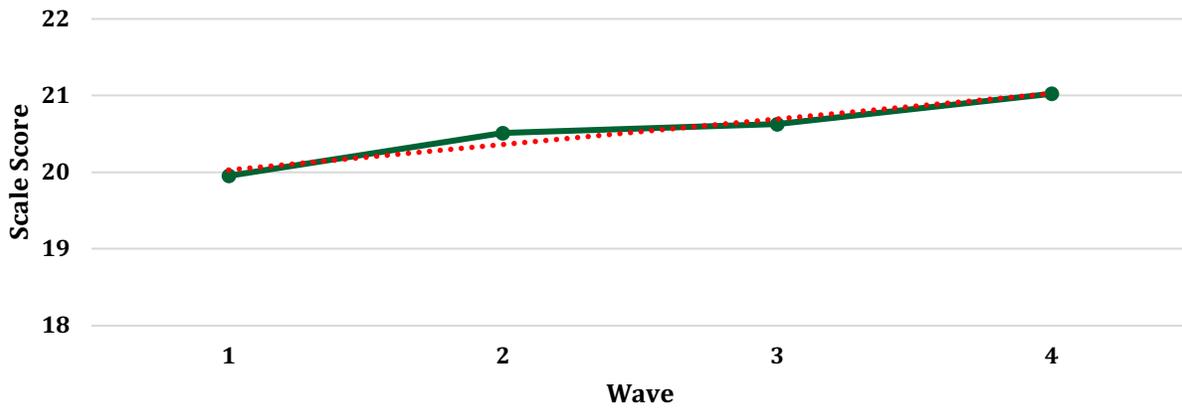
**FIGURE 34: FAMILY SCALE – AVERAGE SCORES ACROSS 4 WAVES**
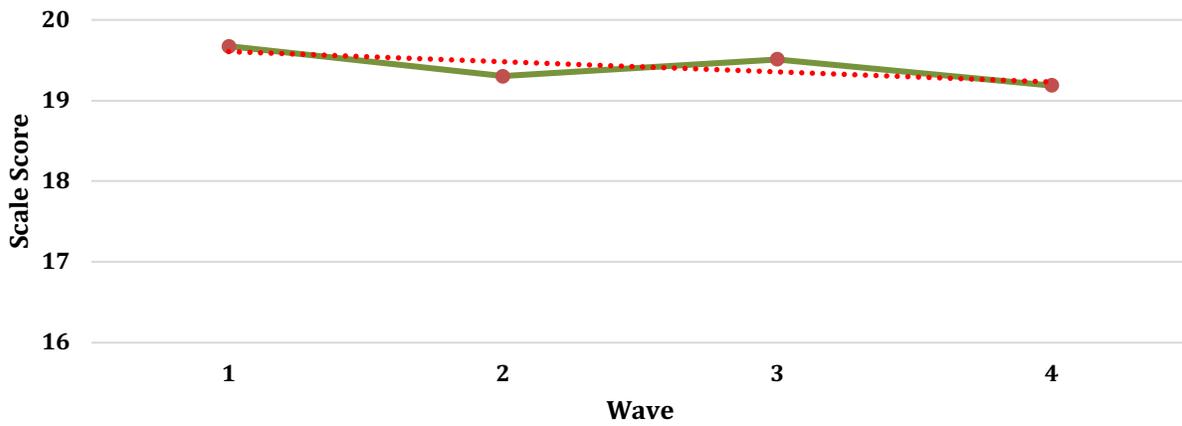


**FIGURE 35: FRIENDS SCALE – AVERAGE SCORES ACROSS 4 WAVES**



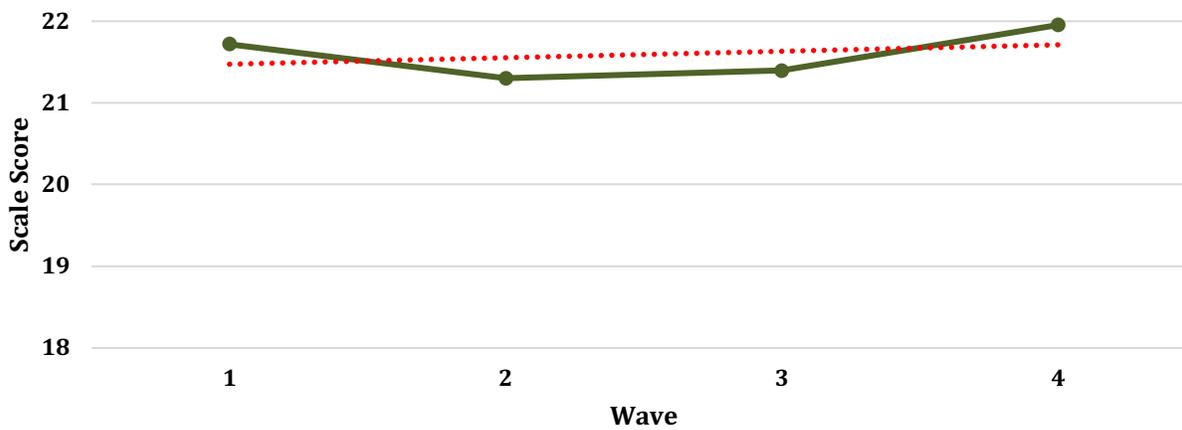**FIGURE 36: SIGNIFICANT OTHERS SCALE – AVERAGE SCORES ACROSS 4 WAVES**

**TABLE 75: MSPSS – ANALYSIS OF CHANGE OVER TIME**

| Scales | Month | Average | Contrasts |
|---|---|---|---|
| | | | F |
| Family | 0 | 19.95 | |
| | 1 | 20.51 | 1.06 |
| | 2 | 20.63 | 0.03 |
| | 3 | 21.02 | 0.49 |
| Friends | 0 | 19.67 | |
| | 1 | 19.30 | 1.06 |
| | 2 | 19.51 | 0.03 |
| | 3 | 19.19 | 0.49 |
| Significant Others | 0 | 21.72 | |
| | 1 | 21.30 | 0.58 |
| | 2 | 21.40 | 0.15 |
| | 3 | 21.95 | 0.33 |
| *p < .05 | | | |

## PAST AND FUTURE COUNSELING

Finally, participants were asked 18 questions pertaining to counseling. The first nine of these questions inquired as to whether participants had engaged in various forms of counselling over the previous seven days, while the second nine were oriented to participants' anticipated contact with counselors over the next seven days. Participants responded No (0) or Yes (1) to all questions. The results presented in Table 76 demonstrate that participants only very sparingly connected with any form of counseling related to gambling. Although almost all of coefficients were negative suggesting the contact with counselors declined over time, it is important to note that only one of these was statistically significant, namely having 'spoken to a Gamblers Anonymous (GA) sponsor' that, in contrast to the other patterns, increased over the three-months. The other coefficients were so small as to effectively be zero; that is, there was no change across time.

**TABLE 76: DESCRIPTIVE STATISTICS – PAST COUNSELLING (N = 25)**

| Items | First Scale Score | Last Scale Score | Coefficient |
|---|---|---|---|
| *In the past 7 days, have you ...* | | | |
| Called problem gambling or GAM Info helpline | 0.04 | 0.00 | -0.003 |
| Met with problem gambling counselor | 0.04 | 0.04 | -0.002 |
| Connected with GamTalk or other online counselling for gambling | 0.04 | 0.00 | -0.001 |
| Met with another type of counselor about my gambling | 0.08 | 0.12 | 0.000 |
| Met with another type of counselor for non-gambling related concerns | 0.16 | 0.16 | -0.004 |
| Attended a GA meeting | 0.04 | 0.04 | -0.001 |
| Spoken to a GA sponsor | 0.00 | 0.04 | 0.004* |
| Spoken to a loved one about my gambling | 0.60 | 0.48 | -0.011 |
| Sought out info or resources on problem gambling online | 0.16 | 0.12 | 0.003 |

To improve readability, Figures 37 through 45 have been structured with very small horizontal scales. The obvious drawback to this approach is that it appears to demonstrate variation where very little exists. For example, in Figure 37, using a scale ranging between 0 and 0.25, the data looks like this:

**FIGURE 37: CALLED G.A. OR A PROBLEM GAMBLING HELPLINE – AVERAGE SCORES ACROSS 12 WEEKS**
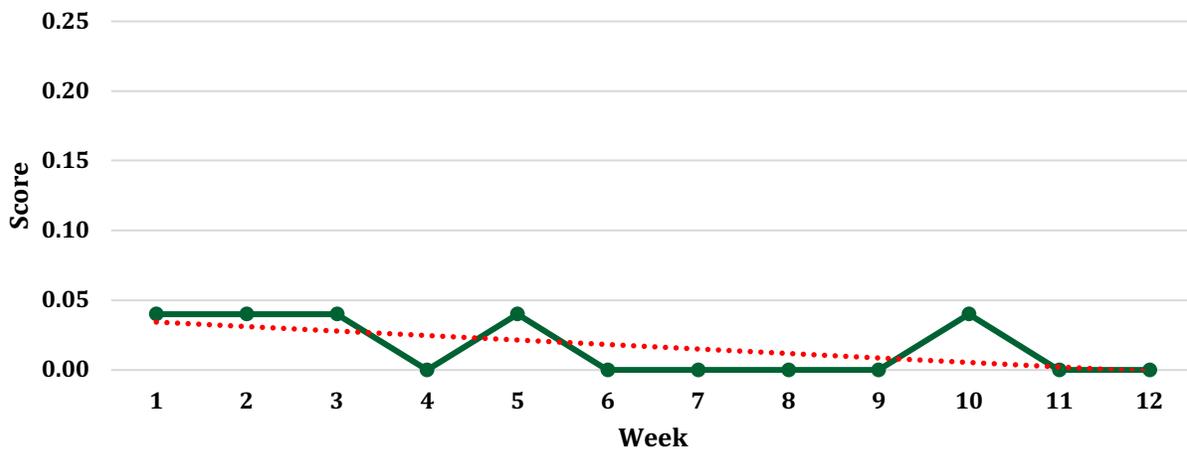


However, if the proper scale (from 0 to 1) was used, the data would look like this:
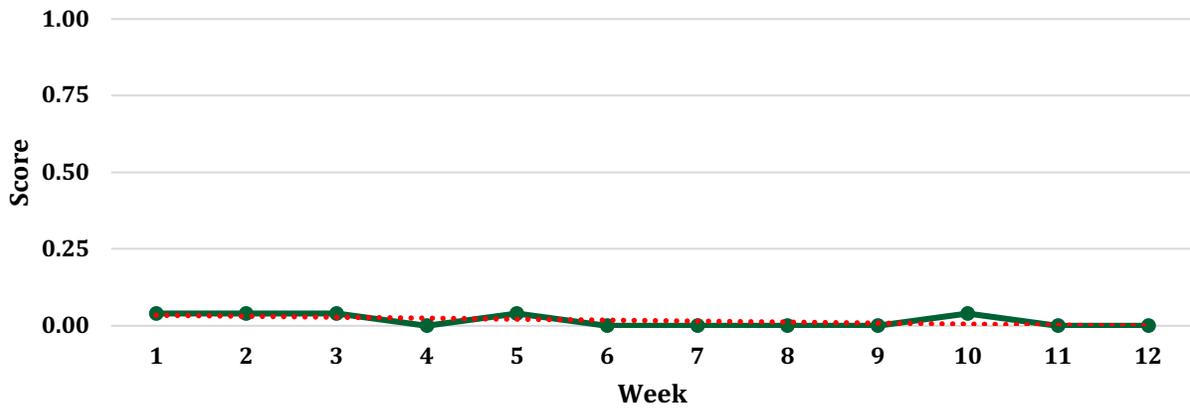
No deception is intended. One simply must keep in mind that what these figures for past counseling show are essentially flat patterns or no change over time, with the exception having 'spoken to a GA counselor', as noted above.

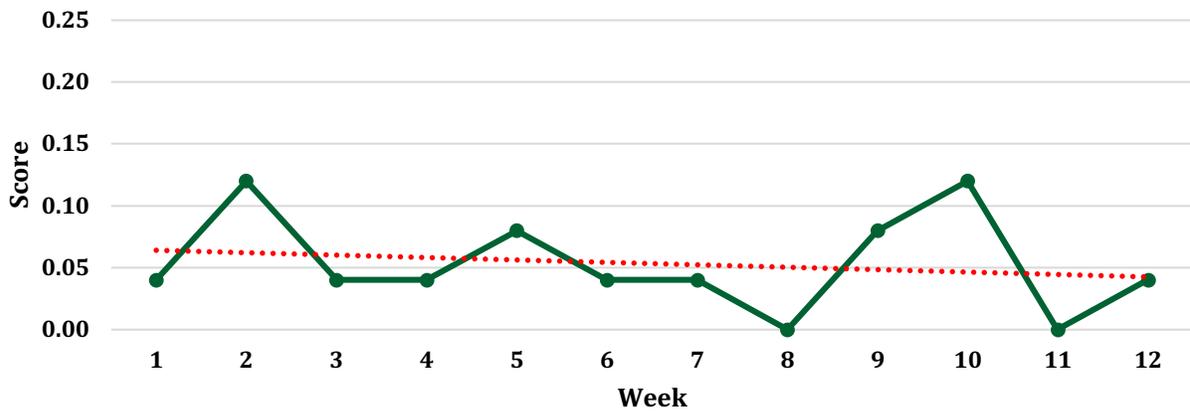**FIGURE 38: MET WITH A PROBLEM GAMBLING COUNSELOR – AVERAGE SCORES ACROSS 12 WEEKS**



**FIGURE 39: CONNECTED WITH GAMTALK/ OTHER ONLINE COUNSELOR – AVERAGE SCORES ACROSS 12 WEEKS**
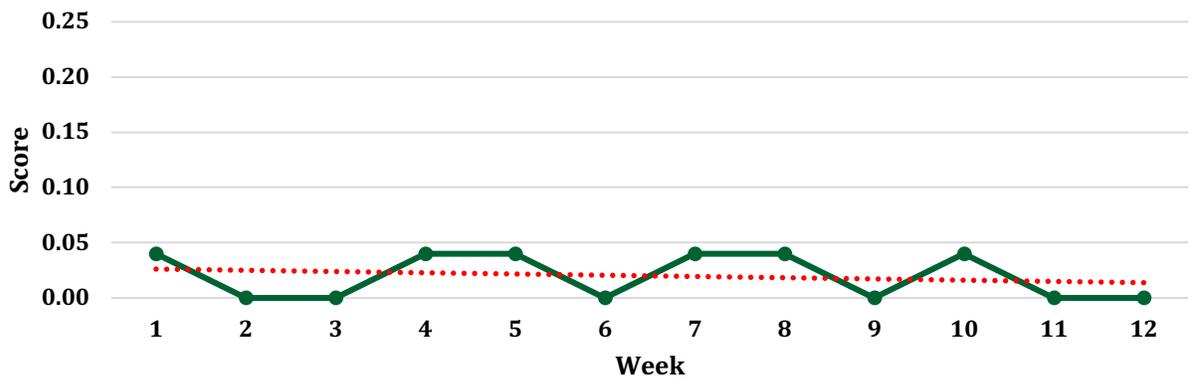
**FIGURE 40: MET WITH ANOTHER TYPE OF COUNSELOR ABOUT GAMBLING – AVERAGE SCORES ACROSS 12 WEEKS**
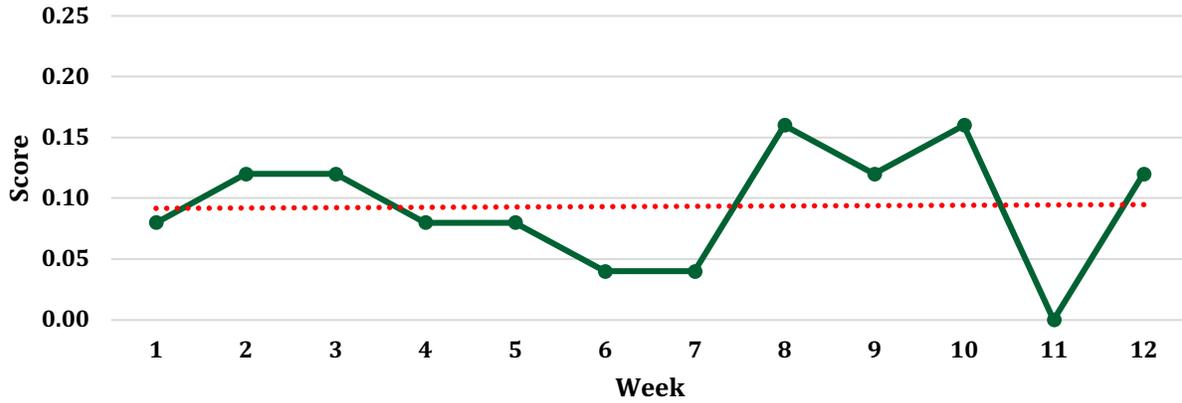


**FIGURE 41: MET WITH COUNSELOR FOR NON-GAMBLING CONCERN – AVERAGE SCORES ACROSS 12 WEEKS**
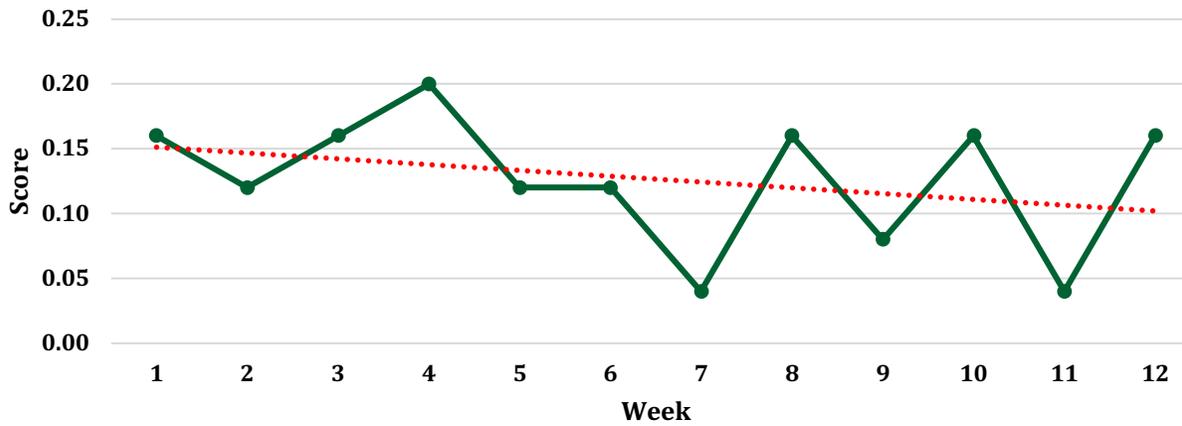


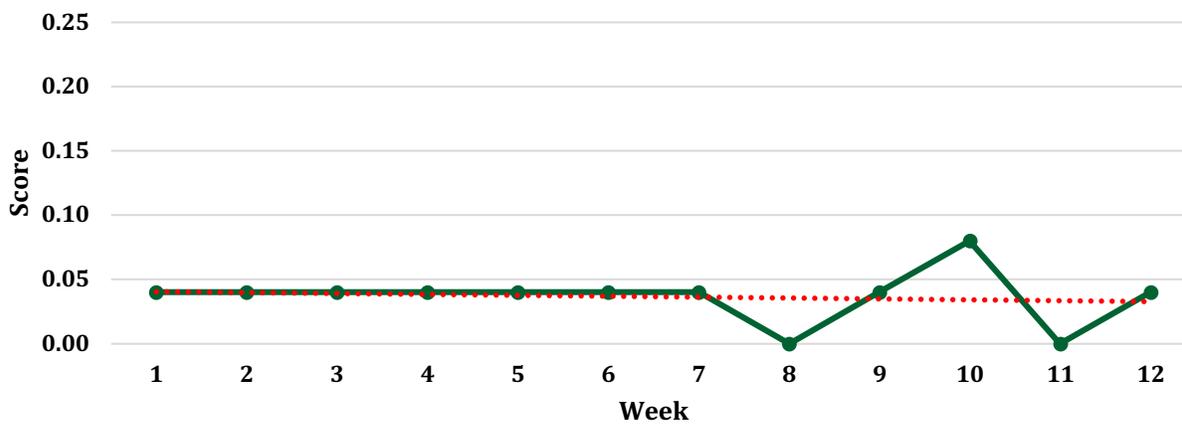**FIGURE 42: ATTENDED A G.A. MEETING – AVERAGE SCORES ACROSS 12 WEEKS**

**FIGURE 43: SPOKEN TO A G.A. SPONSOR – AVERAGE SCORES ACROSS 12 WEEKS**
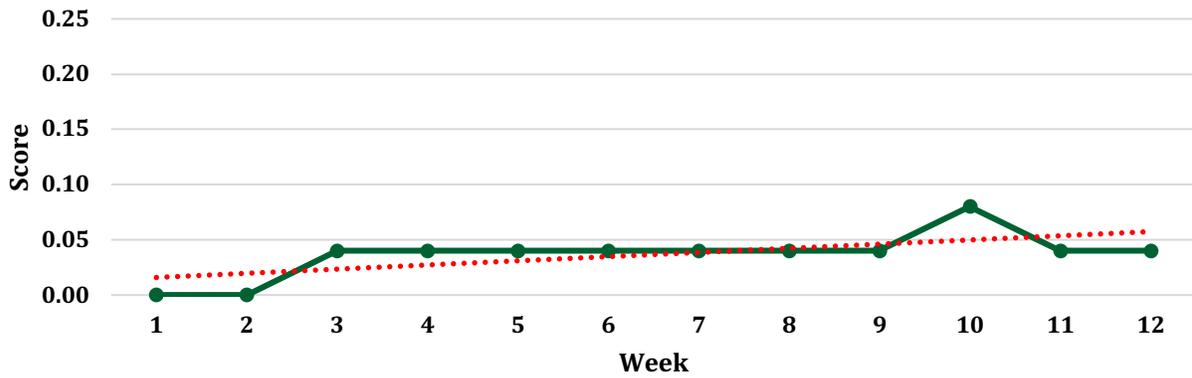


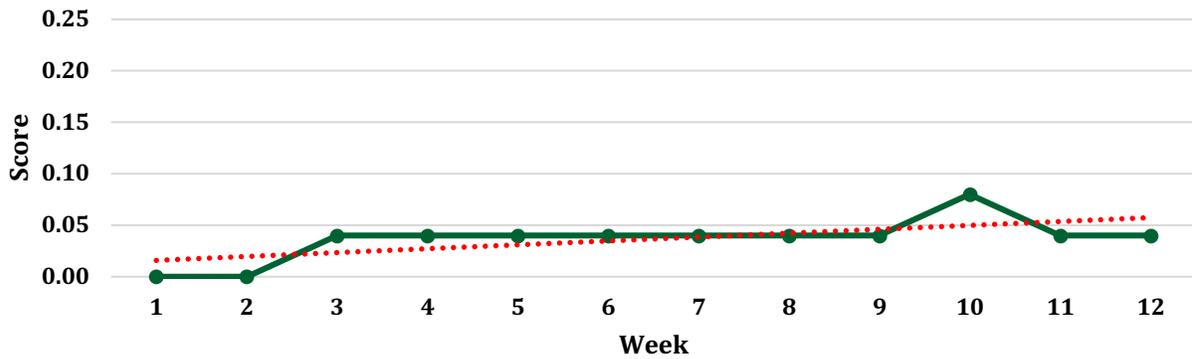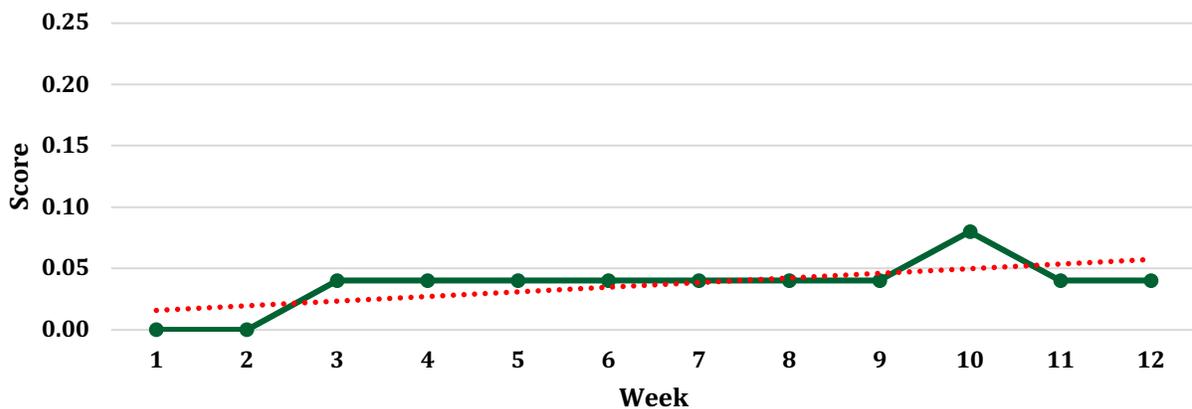**FIGURE 44: SPOKEN TO A LOVED ONE ABOUT GAMBLING – AVERAGE SCORES ACROSS 12 WEEKS**



**FIGURE 45: SOUGHT INFO/RESOURCES FOR PROBLEM GAMBLING ONLINE – AVERAGE SCORES ACROSS 12 WEEKS**



Further evidence of the lack of significant change over the study period is provided in Table 77, which shows no statistically significant changes when scores were aggregated over months.

**TABLE 77: PC – ANALYSIS OF CHANGE OVER TIME**

| Items | Month | Average | Contrasts F |
|---|---|---|---|
| Called problem gambling or GAM Info helpline | 0 | 0.04 | |
| | 1 | 0.03 | 1.00 |
| | 2 | 0.01 | 1.00 |
| | 3 | 0.01 | 0.00 |
| Met with problem gambling counselor | 0 | 0.04 | |
| | 1 | 0.07 | 0.28 |
| | 2 | 0.04 | 0.74 |
| | 3 | 0.06 | 2.09 |
| Connected with GameTalk or other online counseling for gambling | 0 | 0.04 | |
| | 1 | 0.01 | 0.39 |
| | 2 | 0.03 | 0.25 |
| | 3 | 0.01 | 0.39 |
| Met with another type of counselor about my gambling | 0 | 0.08 | |
| | 1 | 0.11 | 0.66 |
| | 2 | 0.08 | 0.66 |
| | 3 | 0.10 | 1.00 |
| Met with another type of counselor for non-gambling related concerns | 0 | 0.16 | |
| | 1 | 0.16 | 0.00 |
| | 2 | 0.11 | 1.89 |
| | 3 | 0.11 | 0.00 |
| Attended a GA meeting | 0 | 0.04 | |
| | 1 | 0.04 | 0.00 |
| | 2 | 0.03 | 1.00 |
| | 3 | 0.04 | 1.00 |
| Spoken to a GA sponsor | 0 | 0.00 | |
| | 1 | 0.03 | 1.00 |
| | 2 | 0.04 | 1.00 |
| | 3 | 0.05 | 1.00 |
| Spoken to a loved one about my gambling | 0 | 0.60 | |
| | 1 | 0.49 | 1.41 |
| | 2 | 0.41 | 1.79 |
| | 3 | 0.42 | 0.04 |
| Sought out info or resources on problem gambling online | 0 | 0.16 | |
| | 1 | 0.04 | 3.27 |
| | 2 | 0.10 | 1.86 |
| | 3 | 0.11 | 0.09 |

*$p < .05$

The results for Future Counseling were very much in line with those for Past Counseling. Once again, Table 78 shows that participants were not, on average, planning to connect with counselors in their immediate futures. There were two significant coefficients, for 'meet with a problem gaming counselor' and 'connect with GamTalk or other online counselor', but these both were negative. In other words, participants expected to connect with these counselors less over time. This provides further evidence of the importance of connecting VSE participants to counseling at the outset of their enrollment experience. One interesting finding was regarding 'speaking to a GA sponsor'. Although participants were most likely to select this response for past counseling, they rarely anticipated that they would be speaking with a GA sponsor over the next seven days. Also noteworthy was the finding that, in terms of the future, participants felt that it was most likely that they would 'speak to a loved one about their gambling'.

**TABLE 78: DESCRIPTIVE STATISTICS – FUTURE COUNSELLING (N = 27)**

| Items | First Scale Score | Last Scale Score | Coefficient |
|---|---|---|---|
| *In the next 7 days, will you ...* | | | |
| Call problem gambling or GAM Info helpline | 0.07 | 0.04 | -0.001 |
| Meet with problem gambling counselor | 0.19 | 0.04 | -0.009* |
| Connect with GameTalk or other online counselling for gambling | 0.07 | 0.00 | -0.007* |
| Meet with another type of counselor about my gambling | 0.04 | 0.04 | -0.001 |
| Meet with another type of counselor for non-gambling related concerns | 0.11 | 0.11 | 0.001 |
| Attend a GA meeting | 0.07 | 0.07 | 0.000 |
| Speak to a GA sponsor | 0.07 | 0.07 | -0.001 |
| Speak to a loved one about my gambling | 0.44 | 0.37 | -0.002 |
| Seek out info or resources on problem gambling online | 0.22 | 0.15 | 0.002 |
| * $p < .05$ | | | |

The comments made above concerning scaling were also relevant for Figures 46 through 54. Again, what may appear to be large fluctuations across time really were not.

**FIGURE 46: CALL G.A. OR A PROBLEM GAMBLING HELPLINE – AVERAGE SCORES ACROSS 12 WEEKS**
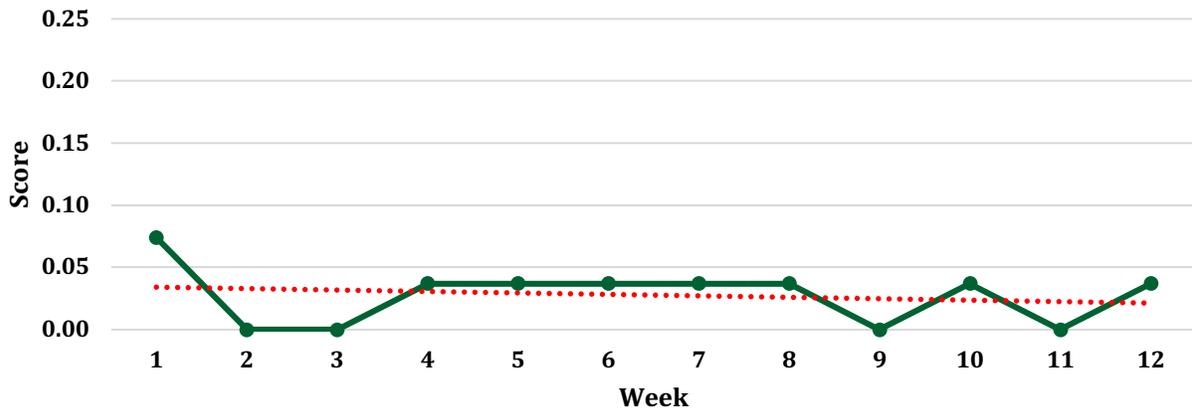


**FIGURE 47: MEET WITH A PROBLEM GAMBLING COUNSELOR – AVERAGE SCORES ACROSS 12 WEEKS**
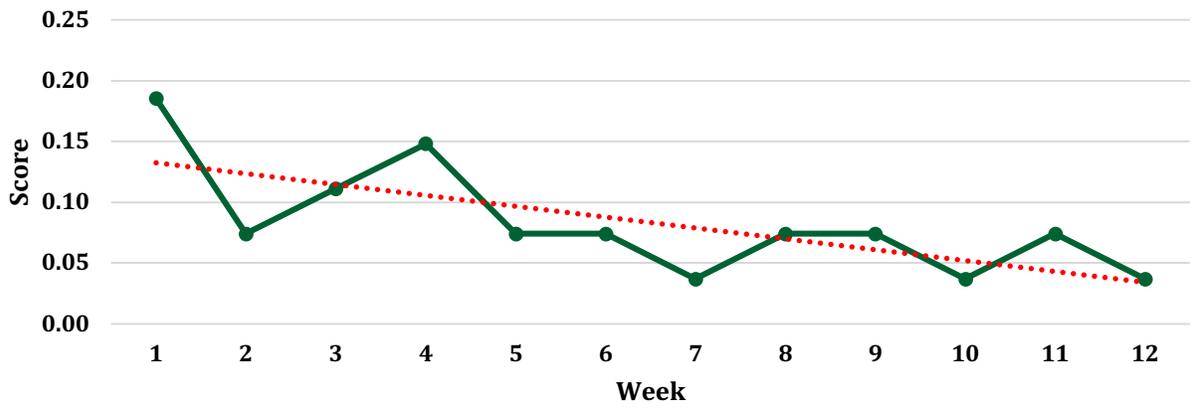


**FIGURE 48: CONNECT WITH GAMTALK/ OTHER ONLINE COUNSELOR – AVERAGE SCORES ACROSS 12 WEEKS**
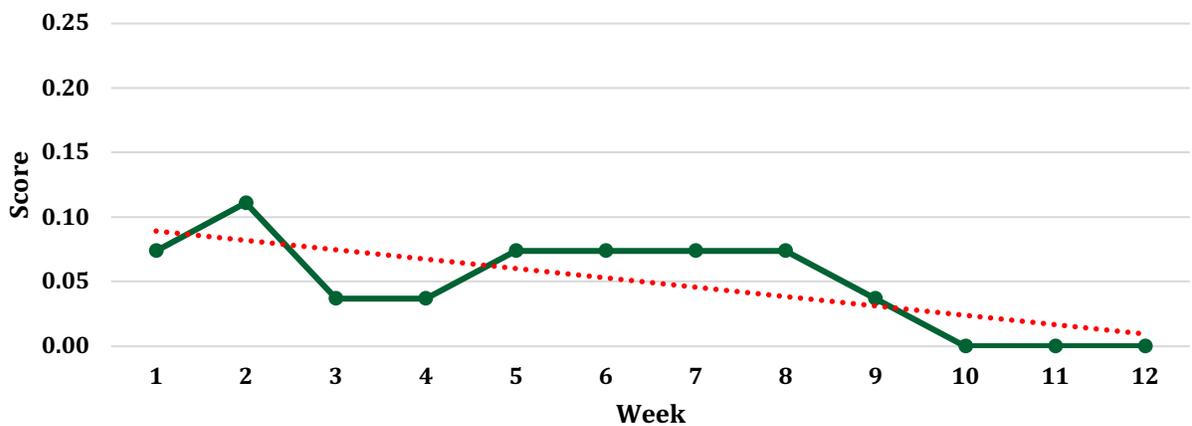
**FIGURE 49: MEET WITH ANOTHER TYPE OF COUNSELOR ABOUT GAMBLING – AVERAGE SCORES ACROSS 12 WEEKS**
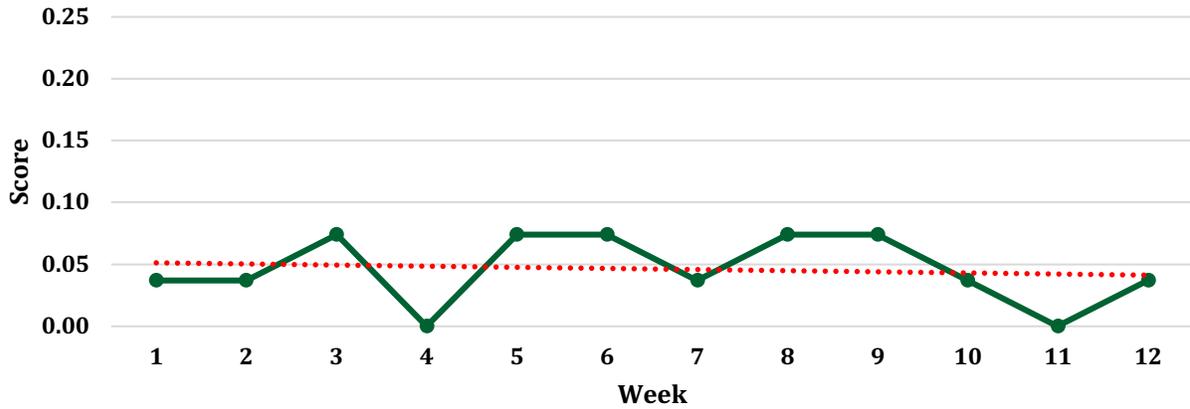


**FIGURE 50: MEET WITH COUNSELOR FOR NON-GAMBLING CONCERN – AVERAGE SCORES ACROSS 12 WEEKS**
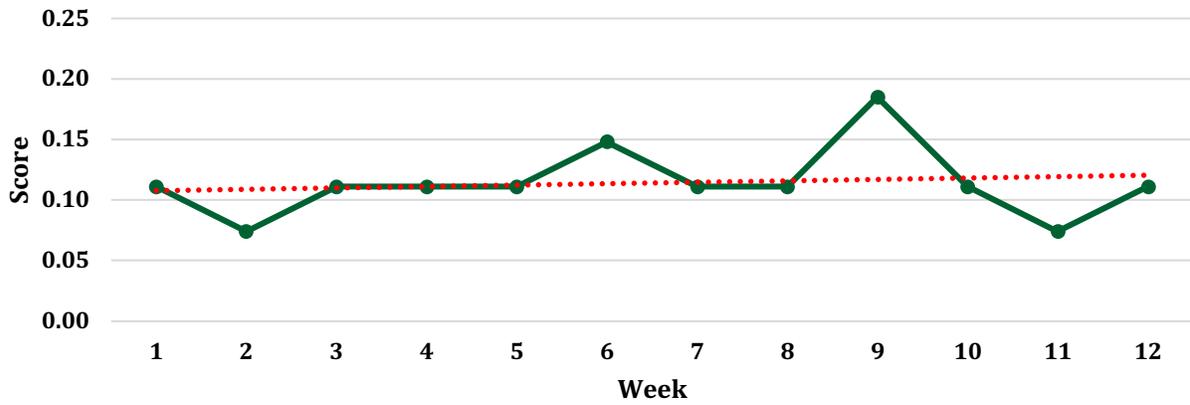


**FIGURE 51: ATTEND A G.A. MEETING – AVERAGE SCORES ACROSS 12 WEEKS**
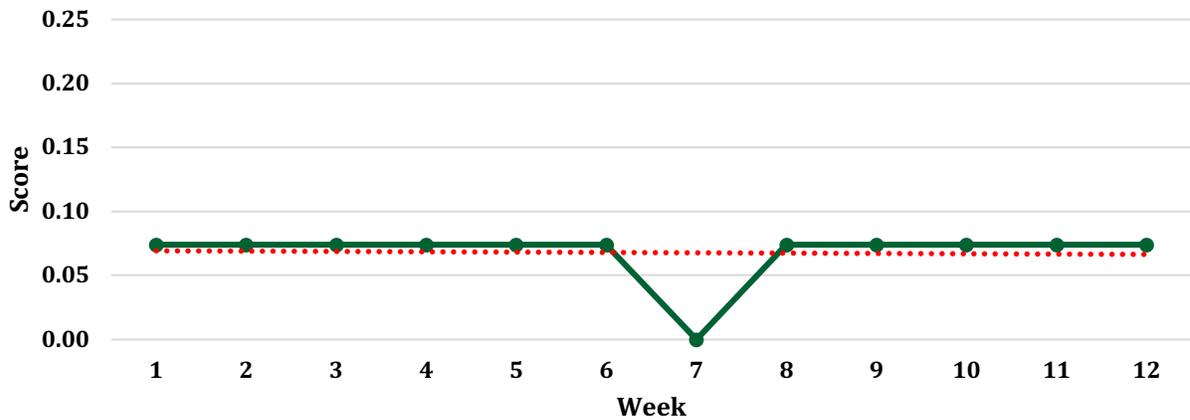
**FIGURE 52: SPEAK TO A G.A. SPONSOR – AVERAGE SCORES ACROSS 12 WEEKS**



**FIGURE 53: SPEAK TO A LOVED ONE ABOUT GAMBLING – AVERAGE SCORES ACROSS 12 WEEKS**



**FIGURE 54: SEEK INFO/RESOURCES FOR PROBLEM GAMBLING ONLINE – AVERAGE SCORES ACROSS 12 WEEKS**
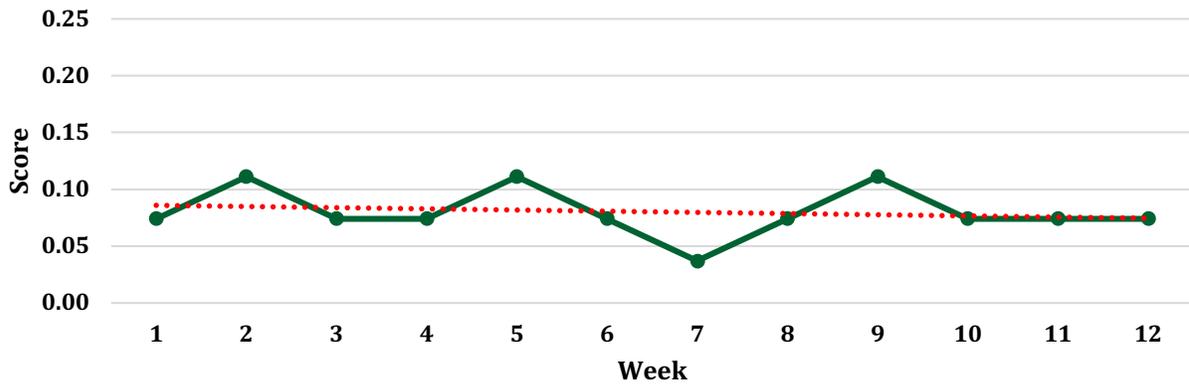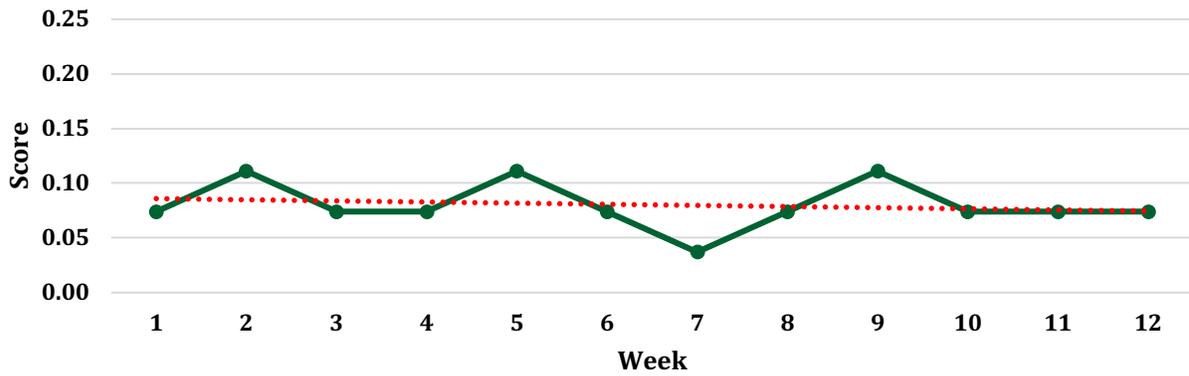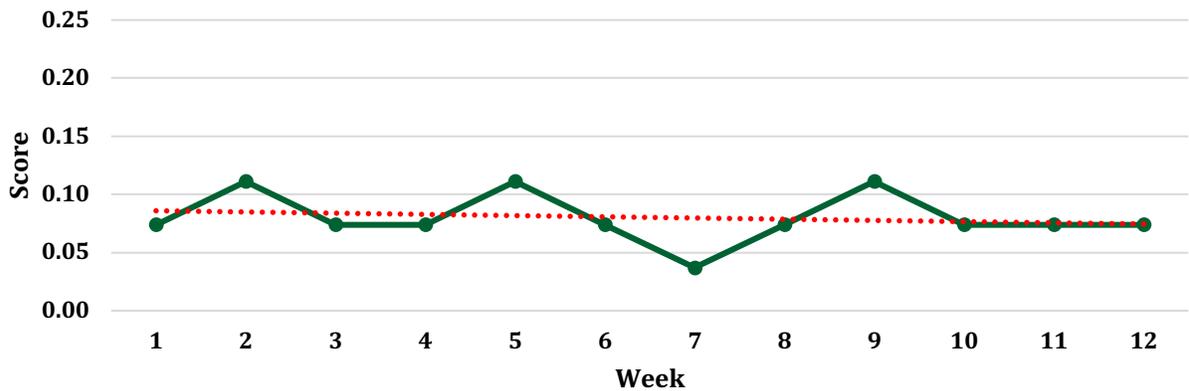


As with Past Counseling, the repeated measure ANOVA of Future Counseling uncovered only a single significant change over time, namely 'seek out info or resources on problem gambling online' ($F = 5.17$; $p < 0.05$) (see Table 79).

**TABLE 79: FUTURE COUNSELLING – ANALYSIS OF CHANGE OVER TIME**

| | Month | Average | Contrasts |
|---|---|---|---|
| **Items** | | | **F** |
| **Call problem gambling or GAM Info helpline** | 0 | 0.07 | |
| | 1 | 0.01 | 1.99 |
| | 2 | 0.04 | 1.00 |
| | 3 | 0.02 | 0.39 |
| **Meet with problem gambling counselor** | 0 | 0.19 | |
| | 1 | 0.11 | 2.36 |
| | 2 | 0.06 | 1.59 |
| | 3 | 0.06 | 0.19 |
| **Connect with GameTalk or other online counseling for gambling** | 0 | 0.07 | |
| | 1 | 0.06 | 0.11 |
| | 2 | 0.07 | 0.32 |
| | 3 | 0.01 | 2.04 |
| **Meet with another type of counselor about my gambling** | 0 | 0.04 | |
| | 1 | 0.04 | 0.00 |
| | 2 | 0.06 | 1.30 |
| | 3 | 0.04 | 1.30 |
| **Meet with another type of counselor for non-gambling related concerns** | 0 | 0.11 | |
| | 1 | 0.10 | 0.14 |
| | 2 | 0.12 | 0.32 |
| | 3 | 0.12 | 0.00 |
| **Attend a GA meeting** | 0 | 0.07 | |
| | 1 | 0.07 | 0.00 |
| | 2 | 0.06 | 2.08 |
| | 3 | 0.07 | 2.08 |
| **Speak to a GA sponsor** | 0 | 0.07 | |
| | 1 | 0.09 | 1.00 |
| | 2 | 0.07 | 1.64 |
| | 3 | 0.08 | 1.00 |
| **Speak to a loved one about my gambling** | 0 | 0.44 | |
| | 1 | 0.40 | 0.49 |
| | 2 | 0.35 | 1.25 |
| | 3 | 0.38 | 1.30 |
| **Seek out info or resources on problem gambling online** | 0 | 0.22 | |
| | 1 | 0.09 | 5.17* |
| | 2 | 0.11 | 0.29 |
| | 3 | 0.16 | 1.71 |
| *$p < .05$ | | | |

At the end of the 12-week period, participants were asked how they were spending their time in the absence of gambling. There were no different themes than what was reported during the T2 interviews. The most common themes were an increase in the amount of time spent with family and friends, being more present at work and in their personal relationships, and increasing the amount of time spent engaged in hobbies. In terms of some of the biggest changes that participants experienced as a result of the VSE program, the main themes were an increased awareness of the negative effects that gambling was having on all aspects of participants' lives, being in a better place financially, a reduction in the urge to gamble, an increase in feelings of happiness, a reduction in stress and anxiety, sleeping and eating better, and spending more quality time with friends and family.

The strengths of the VSE program provided by diary participants were very similar to the strengths identified during the T2 interview. The VSE program was viewed as keeping participants accountable to themselves and others for their gambling, increasing awareness and opportunities for counselling and treatment, providing support for those who wanted help with their gambling-related issues, and removing the temptation to gamble because one is not allowed to enter a gaming facility. Other strengths included assisting people from losing money or becoming financially ruined, and assisting people in developing a degree of self-control over one's gambling. Some participants indicated that they were very happy that after enrolling in the program, there was no contact from BCLC. Several participants stated that completing the weekly surveys as part of this study was a very positive experience because it reminded them of why they enrolled in the VSE program and made them think more carefully about the negative effects of their gambling and the positive changes they made during their exclusion period. In effect, many participants felt that the diary made participants routinely take an honest look at themselves and their gambling.

In terms of the biggest challenges with the VSE program, while many participants indicated that they had not experienced any specific challenges, for those who did, many of the themes were already discussed in the report. In general, the main challenges were remaining committed to not gambling, dealing with the urge to gamble, and thinking about gambling, having better security to ensure that clients were prevented from entering a gaming facility while excluded, feeling disconnected from one's social environment, finding other ways of filling the time previously spent gambling, wanting to reenroll in the program but not wanting to enter a gaming facility to do so, and not being able to participate in non-gambling events held at a gaming facility.

Participants were asked to identify what has been the most difficult aspect of the VSE program. Here, participants spoke about changing their bad habits related to how they spent their time and money to more positive habits. Additionally, some participants spoke of the challenge of taking the step to exclude themselves and the process of enrolling in the program as difficult emotionally and psychologically. Some participants stated that it was difficult to open up to loved ones and friends about their gambling issues and asking forgiveness for their behaviours and some of the consequences related to their gambling. Others mentioned that it was very difficult to stop thinking about gambling, to control their urge to gamble, or to stay out of a gaming facility.

## Recommendations

The VSE program was viewed by participants as an effective strategy to reduce or at least temporarily eliminate gambling behaviours. The program was rated very highly, and most participants 'agreed' or 'strongly agreed' that they would recommend the VSE program to others. Still, there are several ways that the program could be enhanced.

### GAMBLING EDUCATION PROGRAM

As demonstrated by the T1 and psychometric data, participants held several cognitive distortions about gambling. Further, they tended to gamble excessively in a variety of situations that might be addressed by counselling. Participants also routinely failed to follow responsible gaming strategies, such as setting and staying within a time limit for gambling. However, as found in the previous studies, few participants availed themselves of the available counselling opportunities and many barriers to counselling uptake continued to exist for VSE clients. An alternative option might be to offer participants an educational program about healthy gambling behaviours that could be completed during the exclusion period. Past research on VSE gambling reinstatement programs (Cohen & McCormick, 2018) identified that gambling education programs can be offered in a variety of formats, including in-person or online, on a voluntary or mandatory basis, and on a synchronous versus asynchronous basis. The education program could focus on developing participants' awareness of the risks of gambling, issues related to problem gambling, educating clients about how gambling works, correct some of the commonly believed myths about gambling, and how to develop a gambling safety plan.

The previous VSE studies have concluded that many participants do not want mandatory education programs and feel that they would not enroll in the VSE if they were required to take such programming. However, the uptake would likely be low if the program were offered voluntarily and may not reach those who need it most. Therefore, implementing such a program would need to be done cautiously, and the VSE program would need to ensure that the educational program was not too onerous to deter participants from enrollment. Attending an in-person educational program would be difficult for those in rural areas yet may also be desired as a replacement for the lost social opportunities normally provided by formal gambling venues. However, some participants may prefer enrolling online and completing the course anonymously on an asynchronous basis. If BCLC were to develop a gambling education program for excluded clients, offering different models for completing this program would be advisable.

As the maximum amount of time one can enroll in the VSE program in British Columbia is currently three years, many people re-enroll in the VSE program following a previous period of exclusion. Given this, BCLC would also need to consider that any education program might be of little benefit and more of a deterrence to reenrollment if it was required to be completed more than once and as a condition of the program. For example, some participants enrol in the VSE program for 6-month intervals leading up to an important date or holiday as a means of controlling their spending. Others will enroll for six months or one year, return to gambling for a short period, and then re-enroll again soon after. If they were required to complete the program after each enrollment, this might be a deterrence to using the VSE program as some clients currently are.

## ENROLLMENT LENGTH OPTIONS

As in the prior VSE program studies completed by the authors of this report, all but the two-year enrollment length continued to be popular options for participants. While some desired a shorter enrollment, such as one month or three months, allowing this shorter period of enrollment is not recommended. While the data shows that the VSE program provides nearly instant 'relief' from problem gambling with substantive reductions in problem gambling behaviours occurring in the first month of enrollment, past research (McCormick et al., 2018) found that problem gambling behaviours begin to increase quickly again following a return to gambling. Anything less than six months is likely too short of a duration for VSE clients to make meaningful changes in their attitudes towards gambling and problem gambling behaviours. Further, many participants entered the VSE program with high levels of problem gambling behaviours, financial stress, feelings of depression, and many negative emotions. As demonstrated by the diary data, many of these symptoms and emotions fluctuated over the first three months that a client was in the VSE program but showed overall positive levels of change by the third month. Returning to gambling after just one to three months in the VSE program would likely trigger a resurgence of these symptoms. Given these trends, we recommend that six months continue to be the minimum length of enrollment.

However, it is recommended that BCLC examine the options for extending the enrollment length beyond three years. Many participants continued to express a desire for a lifetime exclusion option, and, while there are good reasons for BCLC not yet introducing this option, BCLC might consider expanding the current options of enrollment to include a five year or even 10 year exclusion option. It is recommended that this option only be made available to those who have recently completed at least one year of previous enrollment and that it not be offered to those who are new to the program.

## RE-ENROLLMENT METHOD OPTIONS

As in the previous studies by the authors of this report, one of the areas some participants continued to struggle with was the methods of re-enrolling in the program. Those who are not near one of BCLC's headquarters in Richmond or Kamloops and those who are not attending counselling and are able to re-enroll in their counsellor's office are required to complete their re-enrollment in a land-based gaming venue in British Columbia. Oftentimes, the security office where enrollments occur is located within the casino, and not always close to an external exit. This requires those wishing to re-enroll to travel to a gaming facility, enter it, find and tell a casino staff member of their wish to re-enroll in the VSE program, and then walk through the casino and wait some time to be granted access the office space when the re-enrollment can take place. Post-enrollment, clients are then required to walk back out through the casino floor while being escorted by a staff member. For some participants, this can re-trigger their desire to gamble despite their original intention of re-enrolling, be humiliating, or raise a concern that others in the gaming facility will become aware that they have self-excluded or have done something that requires staff to escort them out of the facility.

While the COVID-19 pandemic challenged society in many ways, it also led to many technological developments and adaptations. For example, to register for the BC Vaccination Card, BC residents

were able to follow several steps on an app, including submitting a photo and a video of themselves repeating a brief phrase, to validate their identity online and receive their certificate of vaccination. Given that such technologies exist and are now being used in this kind of environment, BCLC should explore its capacity to adopt similar technology to enable VSE program clients who have already completed at least one term of exclusion within a recent timeframe, such as within the past two years, to re-enroll in the program via an app that utilizes technology to validate their identity and update their current photo. Like ICBC's shift to online insurance provisions and use of digital technology to collect legal signatures, BCLC could conclude the VSE enrollment online by having a GSA phone the applicant, read through the contract verbally, and then confirm their re-enrollment through a digital signing of the agreement.

We also recommend that BCLC examine their agreement to determine whether a shortened version could be used for those who are re-enrolling within a time frame during which the agreement has not been updated with new information. As one of the least well-received aspects of the re-enrollment process was having the entirety of the VSE agreement read to them each time they enrolled in the program, a viable streamlined process would appear to be beneficial to clients. While it is extremely important that the entire agreement be read to clients at their initial enrollment, this is likely not needed for those who have recently been in the VSE program and who are re-enrolling. BCLC could create a short reminder sheet, similar to an infographic, that reminds the client of the key aspects of the agreement rather than requiring that the agreement be read out to the client in full at each enrollment.

### GSAS AT ENROLLMENT

It is recommended that GSAs continue to be present at all VSE enrollments, if possible. Security staff are highly trained and perceived very positively by participants. However, there continues to be differences in the rate of which problem gambling counselling is encouraged to clients when comparing enrollments completed with security staff only to enrollments completed with GSAs. Further, some participants noted that when both a security staff and GSA were present, the process went more smoothly, as each handled a different component of the paperwork and conversation. While we recognise that it might not always be possible to have a GSA present during enrollment, we strongly encourage that this occurs as often as possible and that BCLC and individual gaming facilities develop strategies and make arrangements that have a GSA present during enrollment.

### TRAUMA-INFORMED ENROLLMENT PRACTICES

The T1 data revealed that the enrollment process is an extremely distressing time for participants. Clients tended to come into the VSE program having experienced a recent financial loss, or feeling as though they have 'hit rock bottom'. At the outset of enrollment, they feel distressed, guilty, and ashamed, among other negative emotions. While still feeling these heightened emotions, they are then verbally read an exclusion agreement, asked to select a length of enrollment, asked about whether they would like their name to be released to a gambling counsellor, asked for their personal demographics, and potentially asked about involvement in a research project. This is likely a very confusing and further distressing time after which they have photographs taken, sign

paperwork, and are escorted out of the gaming facility after being walked through the casino with a casino staff member following closely behind to ensure they leave the property and, if possible, to confirm the client's vehicle's license plate. Although they feel tremendous relief once enrolled in the VSE, many participants expressed feeling ashamed and embarrassed by the entire process of enrolling in the VSE program. This is particularly true when one must wait outside an office while the room is being prepared for the enrollment or for the room's occupant to leave. Given this, it is recommended that BCLC integrate trauma-informed practices into their future training programs for those who enroll clients or play any role in administering the VSE program so that they can better understand the VSE experience from the perspective of program participants. Again, the security staff and GSAs already receive what appears to be excellent training and are very highly regarded by program participants; however, there may be more of an understanding, particularly amongst security staff, of the value and importance of counselling or accessing other supports, particularly in the early days of enrollment, if they are educated, trained, and better prepared to consider the VSE experience from a trauma-informed perspective.

Most importantly, BCLC should review the rooms where enrollments are conducted from a trauma-informed lens as it appears that many physical adjustments could be made to these locations to ensure that clients feel comfortable and supported while engaging in the VSE enrollment process. One major shift would be to recommend that the enrollments are conducted away from the casino floor in a space that is close to the entrances/exits of the casino, and in a space dedicated to VSE enrollments. This space should be large enough that the participant does not feel trapped. The room should be soundproofed to prevent the noise from the casino floor from being heard during the enrollment process, and should contain comfortable seating, dim lighting, and quiet background music. It is recommended that, at the very least, the office used for enrollment not be the security office as this location runs counter to the main messaging of the VSE program, namely that this is voluntary, and that the client has not done anything wrong. If using an office that is the workspace of an employee of the gaming facility, it is important that the office is clean, organized, and that there are not items on the walls or desk incongruent with the intention and purpose of the VSE program, such as advertisements for gambling or pictures/posters of Jackpot winners.

Moreover, resources that may be of interest to the participant could be advertised discreetly. For example, posters advertising problem gambling counselling, debt counselling, or family counseling could be placed on the walls with QR codes that can be scanned by the client's phone should they wish to find out more information about available resources without needing to ask questions in the moment. Handouts with this information should also be provided in the enrollment package, as the client is likely in a state of mind where little information is likely to be retained in the moment. By the same logic, if it is possible for the agreement to be shortened or to have some of the parts of the agreement read by the GSAs or security shortened, this may be advisable, as people experiencing emotional distress are likely not able to give their full attention in the moment.

### REVIEW AND EXPAND THE COUNSELLING OPTIONS

When participants enroll in the VSE program, they are asked if they would consent to have their name released to a problem gambling counsellor. As noted above, in this current sample, few

participants agreed to this request. When they did consent, it was surprising that approximately half of the participants did not recall being contacted by a problem gambling counsellor. Given this, BCLC may want to review the referral process currently in place to ensure that there is a timely referral to counselling being made when a VSE client consents to being contacted by a counsellor. While the provision of counselling is outside of BCLC's mandate, communication between BCLC and GPEB is critical to ensure that those who consent to counselling do not miss this valuable opportunity to participate in some form of treatment.

The data in this current study indicated that, at the beginning of one's exclusion, participants experienced depression, financial stress, and urges to gamble, among other negative emotions. The data also revealed that many participants struggled with emotional regulation making the time they are excluded very difficult socially and psychologically. BCLC may want to review whether a wider range of counselling opportunities can be provided to VSE clients, such as debt counselling or marital or relationship counselling, as these issues appear to be concurrent with problem gambling. Furthermore, as many of the participants struggled with emotional regulation, mindfulness programming may be a useful area to explore as a treatment option, as research has supported its use in reducing feelings of trauma, distress, depression, and addiction (Arch & Ayers, 2013; Chopko & Schwartz, 2012; Doll et al., 2016; Keng et al., 2011; Williams et al., 2010; Zgierska et al., 2009). Mindfulness may be a strategy that VSE clients can use successfully when experiencing urges to gamble or preoccupation with gambling. It appears that struggling to recognize and control emotions is associated with risks for violating the VSE agreement. Providing mindfulness coaching may be a useful strategy to help participants learn how to recognize these emotions and deal with them effectively, as opposed to turning to gambling to cope.


## PROGRAM MARKETING

The previous study estimated that approximately 125,000 British Columbian's met the criteria for moderate or high-risk problem gambling and that the VSE program enrolled approximately 5% of them. Over the time that the current study was recruiting participants, around 371 gamblers either enrolled for the first time or re-enrolled in the VSE program each month. The authors of this report were not provided with any information by BCLC to suggest that the program could not accommodate even more first time or repeat clients. As the current study focused only on those who were using the VSE program and not those who might be at-risk for problem gambling but had not ever enrolled in the VSE program, it is not possible for the authors to reach any specific conclusions about why more people do not enroll in the VSE program in British Columbia. However, there are several recommendations that may address at least some of the reasons why people who might benefit for the VSE program may not be enrolling in it.

One explanation for people not enrolling in the VSE program may be that there remains a lack of widespread awareness of the existence and purpose of the VSE program. In the next prevalence of problem gambling study, it would be important to ask about the public level of awareness of the VSE program. Another plausible reason for the number of people who would likely benefit from the VSE program but have not ever enrolled in it may be that there still remain myths about the program that need correction. In the current study, participants seemed to have a very good

understanding of the mandate and nature of the VSE program; however, many of these participants had previously been enrolled in the VSE program and so have had time to correct any myths or misconceptions they may have previously endorsed. These myths may still exist among the non-VSE population of disordered gamblers. Finally, there may be gamblers who are aware of the VSE program and understand the nature of how the program operates, but who remain unconvinced of the benefits associated with enrolling in the program or fear the shorter- and longer-term effects of excluding themselves.

To address these concerns, it is recommended that BCLC take some of the positive stories emerging from the interviews and use these to market the program. In particular, the study has provided further evidence that the effects of this program are immediate. While participants go into the enrollment process feeling distressed, ashamed, and overwhelmed, once the enrollment process has concluded, they reported an increase in feeling excited, strong, proud, relieved, and inspired. Within one month of enrolling, their symptoms of problem gambling dropped from high-risk levels to low or no-risk levels. Their negative emotions, such as depression, stress, and anxiety, decreased and they were experiencing fewer thoughts about gambling and urges to gamble while experiencing increases in their perceived quality of life. It is important to share these findings with those who could benefit from the program and encourage them to take a chance on it, even if it is just for six months. Further, BCLC could ask those who are re-enrolling in the program if they would be interested in sharing a few short words about how the program has helped them and use these to develop a short marketing video that highlights these experiences and successes to draw a wider range of potential participants into the program. These clips could be posted on BCLC's website, played on tv screens or in elevators or bathrooms in gaming venues across the province, or marketed on the radio or tv, among other marketing techniques; all with the explicit consent of the client.

### VSE MOBILE APP

It is recommended that BCLC explore the possibility of developing a mobile app for self-excluded participants. Many of the diary participants spoke about the varied benefits of being held accountable each week through participating in the weekly diary check-ins. They appreciated reflecting that they had made it another week and thinking about what they had accomplished since enrolling in the VSE program. They felt that the weekly check-ins reminded them of the importance of their exclusion and the commitment they had made to themselves and others. However, the qualitative interview data also revealed a desire for support groups where self-excluded participants could connect and share with one another their experiences, successes, and challenges. With this in mind, BCLC should strongly consider developing a mobile app that would allow VSE clients to track their progress in the exclusion program, identify and record their successes, such as by estimating the amount of money saved each week or month since their period of exclusion began, provide an anonymized platform for conversations with other VSE clients for social support, provide current links to problem gambling and other related counselling resources, provide healthy gambling strategies and tips to avoid urges to gamble, encourage mindfulness activities, and to allow clients to re-enroll in the VSE program when their period of exclusion has been completed. If BCLC implements a reinstatement process, this could also be included on the mobile app. If not

feasible to create a support group through the app, it is still recommended that BCLC explore options for developing the other elements of a mobile app, as many participants wished to be able to access some form of ongoing social support, particularly for those in the rural or northern areas where gaming facilities are one of the few sources of social activity. This is very important because, as mentioned in the report, one of the challenges experienced by VSE clients is social isolation that is the result of their main social outlet being removed while excluded. It is possible that if potential participants had alternative options for socializing and receiving support, this may remove one of the barriers to enrollment and remove one of the reasons for attempting to violate one's agreement.

## FUTURE RESEARCH

There are several areas where we recommend continued or future research. Previous reviews of BCLC's VSE program identified a small group of 'chronic' violators who would attempt to re-enter the casino multiple times during their exclusion, despite the presence of disincentives, such as the jackpot rule. The current study sought to shed light on the underlying issues that may motivate continued attempts to violate the VSE agreement; however, the shortened recruitment period and the closure of gaming venues because of the COVID-19 pandemic meant that the sample of program violators was quite small. It would appear that violation attempts have become less common because of the jackpot rules, thus requiring an even larger baserate of initial study participants to generate a large enough sample to conduct meaningful statistical analyses on VSE program violators. Given this, it is recommended that future research attempt to specifically recruit a sample of program violators at the point of the attempted violation. Currently, program violators are reminded of their agreement and escorted off the premises. During this interaction, they may also be offered the opportunity to be connected to counselling again. Moreover, at that time, they could also be provided with an invitation to participate in a study on VSE violation attempts, with the goal of understanding what triggers or motivates violation attempts.

Given that counselling uptake continues to be very low among participants, future research should examine the effects of a more proactive enrollment approach. Rather than asking participants if they would like to be contacted by a problem gambling counsellor, it is recommended that BCLC work with the Gaming Policy and Enforcement Branch (GPEB) to explore the potential to share the names of all VSE clients enrolling in the program. GPEB could then reach out to the VSE clients within the first week of their enrollment to explain the options for counselling uptake and to clarify any potential myths that the client may have about problem gambling counselling or treatment in British Columbia. At this point, should the VSE client not wish to access counselling, they should be removed from the contact list. By proactively connecting VSE clients with a counsellor, it is possible that once clients have had some time to adjust to being excluded from gambling and to properly consider the benefits that counselling may offer, more VSE clients will be amenable to accessing counselling or treatment.

As part of this current study's methodology, there was an attempt to include a sample of online clients who enrolled in the VSE program through the PlayNow website. The purpose of doing so was to be able to compare this group of clients to land-based VSE clients to understand the different experiences of these two sample groups with the VSE program, with emphases on support needs,

reinstatement, treatment uptake, and gambling behaviour while excluded. However, recruitment on the PlayNow website for this study was extremely low (n = 12). While BCLC was very helpful in trying to recruit to the study from those who excluded through the PlayNow website, this ultimately was not successful. Still, future research should attempt to tap into this sample of VSE clients to better understand their demographics, gambling behaviours, and experiences with the VSE program.

# References

American Psychiatric Association. (2013). *DSM-5 Self-Rated Level 1 Cross-Cutting Symptom Measure-Adult.*

Arch, J.J. & Ayers, C.R. (2013). Which treatment worked better for whom? Moderators of group cognitive behavioral therapy versus adapted mindfulness based stress reduction for anxiety disorders. *Behavior Research and Therapy, 51,* 434-442. http://dx.doi.org/10.1016/j.brat.2013.04.004

Bouju, G., Hardouin, J-B., Boutin, C., Gorwood, P., Le Bourvellec, J-D., Feuillet, F., Venisse, J-L., & Grall-Bronnec, M. (2014). A shorter and multidimensional version of the Gambling Attitudes and Beliefs Survey (GABS-23). *Journal of Gambling Studies, 30*: 349-367. DOI 10.1007/s10899-012-9356-3

Burns, D.D. (1984). *Feeling good: the new mood therapy*. William Morrow.

Chopko, B.A. & Schwartz, R.C. (2012). Correlates of career traumatization and symptomatology among active-duty police officers. *A Critical Journal of Crime, Law and Society, 25*(1), 83-95. https://doi.org/10.1080/1478601X.2012.657905

Cohen, I.M. & McCormick, A.V. (2018). *Review of the Literature and Consultations on Voluntary Self-Exclusion Programs' Reinstatement, Renewal, and Revocation Policies and Practices.* POTUS Consulting.

Cohen, I.M., McCormick, A.V., & Corrado, R.R. (2011). *BCLC's Voluntary Self-Exclusion Program: Perceptions and Experiences of a Sample of Program Participants.* British Columbia Centre for Social Responsibility, Abbotsford: BC

Cohen, I.M., McCormick, A.V., & Davies, G. (2017). *British Columbia Lottery Corporation's Voluntary Self-Exclusion Program from the Perspectives and Experiences of Program Participants.* Centre for Public Safety and Criminal Justice Research, University of the Fraser Valley.

Currie, S. R., Hodgins, D. C., & Casey, D. M. (2013). Validity of the Problem Gambling Severity Index interpretive categories. *Journal of Gambling Studies, 29*, 311–327. https://doi.org/10.1007/s10899-012-9300-6.

Dechant, K. (2014). Show me the money: incorporating financial motives into the Gambling Motives Questionnaire. *Journal of Gambling Studies, 30*: 949-965. DOI 10.1007/s10899-013-9386-5

Diener, E., Emmons, R.A., Larsen, R.J. & Griffin, S. (1985). The Satisfaction with Life Scale. *Journal of Personality Assessment, 49*: 71-75.

Doll, A., Hölzel, B.K. Bratec, S.M., Boucard, C.C., Xie, X., Wohlschläger, A.M., & Sorg, C. (2016). Mindful attention to breath regulates emotions via increased amygdala-prefrontal cortex connectivity. *Neuroimage, 134*: 305-313. http://dx.doi.org/10.1016/j.neuroimage.2016.03.041

Ferris, J. & Wynne, H. (2001). *The Canadian Problem Gambling Index: Final Report*. Ottawa: Canadian Centre on Substance Abuse.

Flack, M. & Buckby, B. (2020). Impulsivity and problem gambling: can the anticipated emotional rewards explain the relationship? *International Journal of Mental Health and Addiction, 18*: 567-581. https://doi.org/10.1007/s11469-018-9950-4

Keng, S. L., Smoski, M. J., & Robins, C. J. (2011). Effects of mindfulness on psychological health: A review of empirical studies. *Clinical Psychology Review*, *31*(6), 1041–1056. https://doi.org/10.1016/j.cpr.2011.04.006

Littman-Sharp, N., Turner, N.E., & Toneatto, T. (2009). *Inventory of Gambling Situations (IGS): User's Guide*. Centre for Addiction and Mental Health, Toronto, ON.

Lovibond, P.F. & Lovibond, S.H. (1995). The structure of negative emotional states: comparison of the Depression Anxiety Stress Scales (DASS) with the Beck Depression and Anxiety Inventories. *Behaviour Research and Therapy, 33*(3): 335-343. https://doi.org/10.1016/0005-7967(94)00075-U

McCormick, A.V., Cohen, I.M., & Davies, G. (2018) Differential effects of formal and informal gambling on symptoms of problem gambling during voluntary self-exclusion. *Journal of Gambling Studies, 34*: 1013-1031. https://doi.org/10.1007/s10899-018-9743-5

Merkouris, S.S., Rodda, S.N., Austin, D., Lubman, D.I., Harvey, P., Battersby, M., Cunningham, J., Lavis, T., Smith, D., & Dowling, N.A. (2017). GAMBLINGLESS: FOR LIFE study protocol: a pragmatic randomised trial of an online cognitive-behavioural programme for disordered gambling. *BMJ Open, 7*(2): e014226, 1-14. DOI: 10.1136/bmjopen-2016-014226

Philander, K.S., Gainsbury, S.M., & Grattan, G. (2019). An assessment of the validity of the Gamblers' Belief Questionnaire. *Addictive Behaviors, 97*: 104-110. https://doi.org/10.1016/j.addbeh.2019.05.029

Pontes, H.M. & Griffiths, M.D. (2015). Measuring DSM-5 internet gaming disorder: development and validation of a short psychometric scale. *Computers in Human Behavior, 45*: 137-143. http://dx.doi.org/10.1016/j.chb.2014.12.006

Raylu, N. & Oei, T.P.S. (2004). The Gambling Urge Scale: development, confirmatory factor validation, and psychometric properties. *Psychology of Addictive Behaviors, 18*(2): 100-105. DOI: 10.1037/0893-164X.18.2.100

Reid, R.C., Cyders, M.A., Moghaddam, J.F., & Fong, T.W. (2014). Psychometric properties of the Barratt Impulsiveness Scale in patients with gambling disorders, hypersexuality, and methamphetamine dependence. *Addictive Behaviors, 39*: 1640-1645. http://dx.doi.org/10.1016/j.addbeh.2013.11.008

Reid, R.C., Rosenthal, R., & Fong, T.W. (2015). *Psychometric properties of the gambling consequences scale in patients with a gambling disorder*. Poster session presented at the National Center for Responsible Gaming Conference on Gambling and Addiction, Las Vegas, NV.

Steenbergh, T.A., Meyers, A.W., May, R.K., & Whelan, J.P. (2002). Development and validation of the Gamblers' Beliefs Questionnaire. *Psychology of Addictive Behaviors, 16*(2): 143-149. DOI: 10.1037//0893-164X.16.2.143

Stewart, S.H. & Zack, M. (2008). Development and psychometric evaluation of a three-dimensional Gambling Motives Questionnaire. *Addiction, 103*: 1110-1117. doi:10.1111/j.1360-0443.2008.02235.x

Tabri, N., Salmon, M.M., & Wohl, M.J.A. (2021). Financially focused self-concept in disordered gambling: comparisons between non-disordered and disordered gambling subtypes. *Addiction Research & Theory, 29*(1): 18-29. https://doi.org/10.1080/16066359.2020.1714039

Tabri, N., Wohl, M.J.A., Eddy, K.T., & Thomas, J.J. (2017). Me, myself and money: having a financially focused self-concept and its consequences for disordered gambling. *International Gambling Studies, 17*(1): 30-50. DOI: 10.1080/14459795.2016.1252414

Tabri, N., Wohl, M.J.A., Wood, R.T., & Philander, K. (2018). Financially focused self-concept is associated with etiological and maintenance factors of gambling disorder among non-problem gamblers. *Journal of Gambling Issues, 39*: 308-313. DOI: http://dx.doi.org/10.4309/jgi.2018.39.12

Tangney, J.P., Baumeister, R.F., & Boone, A.L. (2004). High self-control predicts good adjustment, less pathology, better grades, and interpersonal success. *Journal of Personality, 72*(2): 271-324.

Tiet, Q.Q., Leyva, Y.E., Moos, R.H., & Smith, B. (2017). Diagnostic accuracy of a two-item Drug Abuse Screening Test (DAST-2). *Addictive Behaviors, 74*: 112-117. DOI: 10.1016/j.addbeh.2017.06.008

Tsatali, M., Moraitou, D., Papantoniou, G., Foutsitzi, E., Bonti, E., Kougioumtzis, G., Ntritsos, G., Sofologi, M., & Tsolaki, M. (2021). Measuring impulsivity in Greek adults: psychometric properties of the Barratt Impulsiveness Scale (BIS-11) and Impulsive Behavior Scale (Short Version of UPPS-P). *Brain Sciences, 11*: 1007-1019 https://doi.org/10.3390/brainsci11081007

Victor, S.E. Klonsky, E.D. (2016). Validation of a brief version of the Difficulties in Emotional Regulation Scale (DERS-18) in five samples. *Journal of Psychopathology and Behavioral Assessment, 38*(4): 582-589. DOI 10.1007/s10862-016-9547-9

Watson, D., Clark, L.A., & Tellegan, A. (1988). Development and validation of brief measures of positive and negative affect: the PANAS scales. *Journal of Personality and Social Psychology, 54*(6): 1063-1070.

Williams, V., Ciarrochi, J. & Deane, F. P. (2010). On being mindful, emotionally aware, and more resilient: longitudinal pilot study of police recruits. *Australian Psychologist, 45*(4), 274–282. https://doi.org/10.1080/00050060903573197

Winfree, W.R., Ginley, M.K., Whelan, J.P., & Meyers, A.W. (2015). Psychometric evaluation of the Gamblers' Beliefs Questionnaire with treatment-seeking disordered gamblers. *Addictive Behaviors, 43*: 97-102. http://dx.doi.org/10.1016/j.addbeh.2014.12.016

Winfree, W.R., Meyers, A.W., & Whelan, J.P. (2013). Validation of a Spanish translation of the Gamblers' Beliefs Questionnaire. *Psychology of Addictive Behaviors, 27*(1): 274-278. DOI: 10.1037/a003082

Wood, R.T.A., Wohl, M.J.A., Tabri, N., & Philander, K. (2017). Measuring responsible gambling amongst players: development of the Positive Play Scale. *Frontiers in Psychology, 8*: Article 227. doi: 10.3389/fpsyg.2017.00227

Zgierska, A., Rabago, D., Chawla, N., Kushner, K., Koehler, R., & Marlatt, A. (2009). Mindfulness meditation for substance use disorders: a systematic review. *Substance Abuse, 30*: 266-294. DOI: 10.1080/08897070903250019

Zimet, G.D., Dahlem, N.W., Zimet, S., & Farley, G.K. (1988). The Multidimensional Scale of Perceived Social Support. *Journal of Personality Assessment, 52*(1): 30-41.