

A National Survey Indicates Support for the Inclusion of Additional Behavioral Addictions as Addictive Disorders

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ABSTRACT

Background and aims: Behavioral addictions have been a topic of debate, research and controversy in recent years. Their inclusion in DSM-5 and ICD-11, albeit partially, have further brought the debate to light. A national survey among psychiatrists in Israel showed results relevant to the discussion.

Methods: An electronic survey using Google Docs format was distributed among psychiatrists in Israel using professional groups and email. Psychiatrists were asked about their familiarity with DSM-5 gambling disorder diagnosis, about their agreement with the recent diagnostic changes and about the extent to which they actually use the gambling disorder diagnosis in their daily clinical routine. In addition, they were asked to what extent they viewed any of four addictive behaviors as distinct clinical disorders, focusing on behaviors related to gambling, sex, gaming and smartphones.

Results: ~10% of practicing psychiatrists in Israel answered the survey. An overwhelming majority favored inclusion of behavioral addictions as distinct clinical diagnoses. Younger age and female gender were associated with higher support for the clinical diagnosis model. For each of the four addiction categories, an individual's view was only moderately correlated with the view that he or she expressed for the remaining three behaviors.

Discussion and conclusion: This study demonstrates that among a representative sample of psychiatrists in Israel there is a wide, although not unanimous, support for the

emerging concept of broadening the DSM's addictions section to encompass key behavioral addictions and regard them as discrete diagnoses.

INTRODUCTION

The fifth edition of the Diagnostic and Statistical Manual (DSM-5)(1) included several significant and controversial changes (2). Many of these changes reflected accumulated research coupled with leading expert opinion. While changes in OCD and PTSD classifications received much attention, two additional prominent updates were the insertion of gambling disorder as a form of behavioral addiction (3, 4) and internet gaming disorder as a possible future diagnosis placed in the “section for conditions requiring further study” (5). ICD-11 (6), published in 2019, included a subsection dedicated to behavioral addictive and substance use disorders, and in this context gambling and gaming disorders were addressed as distinct diagnoses.

These conceptual developments towards the validity of behavioral addictions as distinct clinical diagnoses, as represented in the ICD-11 and DSM-5, was welcomed by many experts and opinion leaders (7), but caused others to raise concerns (8, 9). Some of these concerns regarded potential stigmatization of individuals with behavioral addictions once they were labelled as addicts (10), which

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may prevent them from seeking treatment. Others noted a possible “over-medicalization” of normal, everyday activities (11,12). Finally, some opponents stated that making such large conceptual changes based on current scientific knowledge seems premature (13).

Pathological gambling has previously been viewed as an issue of “impulse control” and appeared in chapters in DSM-III and DSM-IV editions (14). Over the years, clinical similarities have also been found between pathological gambling and obsessive-compulsive disorders (14). Proponents for inclusion of gambling disorder as addiction relied on similar clinical findings (15), comorbidity with substance addiction (16-18), common biological and genetic findings (19,20), and similar therapeutic approaches (21). Those opposing the inclusion argued that imaging findings (21) and other biological findings (22) support the link between gambling disorder and various mental disorders other than substance addiction disorders.

Regarding computer game addiction, it has been argued that despite some evidence of the phenomenon (23,24), it is unclear whether there is sufficient scientific basis to view it as a separate clinical phenotype (25). Other concerns dealt with cross-cultural reliability and validity (4). Preliminary data indicated that exposure to computer games was less addictive than gambling (26), and that the overall incidence of this disorder was lower than other addiction disorders (26).

Gradual acceptance of behavioral addiction disorders as valid and legitimate diagnoses has been demonstrated through shifting attitudes toward sexual, food and smartphone addictions, as expressed by both the scientific community and the general public (27-29). To date, much has been published regarding behavioral addictions, focusing on psychological and biological etiologies, available treatments and prognoses (30,31). However, attitudes of psychiatrists regarding acceptance and usage of behavioral addiction disorders first appearing in DSM-5 have yet to receive adequate attention. In this manuscript we present results from a large nation-wide survey addressing this issue. We chose to focus on two behavioral addictions mentioned in the new DSM edition (i.e., Gambling Disorder and Gaming Disorder) as well as addiction to sex and to smartphones, as both have been extensively discussed in recent literature (32,33). Aiming to determine the scope of acceptance and usage of behavioral addiction diagnoses among psychiatrists, we hypothesized that most clinicians will endorse this novel diagnostic framework, and speculated that the extent of such support will be influenced by individual demographic characteristics.

METHODS

In August 2020, an online survey was administered to psychiatrists and psychiatry residents in Israel. The purpose of the survey was to characterize clinician attitudes toward major changes made in DSM-5 compared to previous editions, focusing on those dealing with addictions. The survey was generated as a Google docs form and distributed to psychiatrists working in hospitals throughout Israel, in day-care centers and in public and private clinics using email and social communication platforms.

The survey included a short demographic and professional questionnaire including questions regarding specialty (adult psychiatry/child and adolescent psychiatry), country and year of residency, professional experience and information about work settings (i.e., public or private, hospital, outpatient clinics, community clinics). Respondents were asked about their familiarity with DSM-5 changes regarding the addition of gambling addiction as a new diagnosis (“Are you aware of the new diagnosis of gambling addiction?”), about their agreement with the change (“How much do you tend to see the definition of gambling addiction as a distinct phenotype?”) and on the extent to which they tend to use a diagnosis of gambling disorder in their clinical routine. Answers were coded on a 5-level ordinal scale. Subjects were then asked about their level of support for the inclusion of gambling addiction alongside substance addiction (“Do you think gambling addiction should be included in the substance use disorder chapter?”). Finally, clinicians were asked to express their opinion regarding future inclusion of computer gaming disorder, addiction to cellular phone/social media and sex addiction in the DSM’s addiction disorders chapter.

For each of the four addictive behaviors, the percentage of psychiatrists who expressed support (binary outcome) for inclusion as distinct psychiatric disorder was calculated, as well as the odds-ratios (95% CIs) for gender and age. Odds-ratios were calculated using multivariate logistic regression models adjusting for country of birth, country of residence, specialty type and professional status. Pairwise correlations (inter-correlations) between attitude (binary variable, support vs. non-support for inclusion as a distinct behavioral addiction disorder) towards each of the four behavioral categories were calculated across individuals, alongside significance and number of individuals assessed for each pairwise correlation. Statistics were performed using Stata 16.1 (StataCorp LLC, U.S.A.).

RESULTS

Across Israel, a heterogeneous and representative sample of 202 psychiatrists (age range 28-73 years), comprising roughly 10% of practicing psychiatrists (34), answered the survey (Table 1). Ninety-five percent of the psychiatrists said they were familiar with the recent change regarding gambling disorder, with some 80% agreeing that gambling disorder indeed represents a valid diagnostic category. Only 5% of respondents answered that they do not see the diagnosis of gambling addiction as a valid phenotype, while 15% of respondents did not have a clear position on the matter. Finally, 55% of the psychiatrists reported that they actually use the gambling disorder diagnosis to a large or very large extent.

An overwhelming majority of psychiatrists favored the inclusion of behavioral addictions as discrete diagnoses, with support ranging from 69% to 85% across the four individual addiction types mentioned (Table 2). Based

Table 1. Demographic characteristics of survey participants

Age, mean±SD	46.6 ±9.7
Gender, n (%)	
Males	111 (55%)
Females	89 (45%)
Country of birth, n (%)	
Israel	120 (59%)
Overseas	82 (41%)
Country of residence, n (%)	
Israel	193 (96%)
Overseas	9 (4%)
Year of residence, n (%)	
Before 1990	15 (7%)
1990-1999	35 (17%)
2000-2010	66 (33%)
2010-2020	86 (43%)
Specialty type, n (%)	
Adults	147 (73%)
Child & adolescent	34 (17%)
Combined*	21 (10%)
Training status, n (%)	
Specialist	164 (81%)
Resident	38 (19%)

* Combined specialty – Adults specialty and Child & adolescent specialty.

Table 2. Support for viewing non-behavioral addictions as distinct psychiatric disorders

Addictive behavior	% [95%CI] agreement	Odds-ratio for agreement	
		Gender (being female) [95%CI]	Age (being 1 year older) [95%CI]
Gambling	85 [79-89]	2.99* [1.21-7.40]	0.98 [0.94-1.03]
Computer gaming	81 [75-86]	3.58** [1.53-8.40]	0.97 [0.93-1.02]
Cellular phone/ social media	69 [62-75]	1.91* [1.02-3.59]	0.98 [0.94-1.01]
Sex addiction	75 [69-81]	2.13* [1.05-4.30]	0.96* [0.92-1.00]

on multivariate logistic regression models adjusting for country of birth, country of residence, specialty type and professional status (Supplementary Tables 1-4), the odds that a female psychiatrist would support the inclusion of non-behavioral addictions as formal diagnoses were roughly 2-3.5 times higher than for male psychiatrists (Table 2), with the largest odds-ratio noted for computer gaming addiction. There was a negative trend between increasing age and inclination to view behavioral addictions as discrete disorders (Table 2), reaching statistical significance in the case of sex addiction, where odds for endorsing this diagnosis decreased by one-third for each decade increase in age.

Across individuals, support for each of the four addiction types was moderately inter-correlated with the other three (phi correlation coefficient in the range of 0.3 to 0.4, Supplementary Table 5), consistent with the notion that psychiatrists tended to view some elements contributing to each diagnosis as independent of each other. A possible exception to this view was the relatively strong correlation between computer gaming and cellular phones/social media ($r_{\phi} = 0.64$), indicating that these two addictions were often viewed as interdependent.

DISCUSSION

The current study demonstrates a broad agreement among psychiatrists regarding behavioral addictions. It shows a wide, even though not unanimous, agreement with the concept of broadening the addictions section of the DSM by including several behavioral addictions and addressing them as discrete diagnoses. A major strength of this study stems from the fact that it is a representative survey of a large number of psychiatrists, who constitute about 10% of all psychiatrists in Israel (34) and are comprised of different subgroups. Furthermore, our survey suggests that consideration should be taken regarding the possibility of including these diagnoses in the appropriate addictions chapter in future DSM and ICD editions. To the best of our knowledge, this is the first study to investigate such clinicians' attitudes in a representative nation-wide sample.

Interestingly, we found that female psychiatrists perceive behavioral addictions as valid diagnoses more than male psychiatrists. There is a scarcity of studies examining gender differences in attitudes towards diagnosis and treatment of substance use disorders, with one such study reporting no such gender differences (35). However, a national survey among 2,000 practicing general inter-

nists, family physicians, obstetricians/gynecologists, and psychiatrists aiming to examine their screening and intervention practices for drug abuse, demonstrated that female physicians were more likely to intervene and offer treatment (36). Consistent with our findings, it is possible that female psychiatrists are more attuned to diagnose a broader range of addiction disorders compared to male psychiatrists. Further research could endeavor to understand the causes of such apparent gender differences.

A somewhat unexpected finding of our study was the negative association between age and inclination to view behavioral addictions as discrete disorders. A possible explanation for this observation could reflect a clinician's inclination to revert to categorical thinking when facing stress associated with the making of a formal diagnosis. As such stress was found to be lower among experienced psychiatrists (37), it is conceivable that older and more experienced clinicians were able to apply a more dimensional understanding, which is less compatible with categorical diagnoses. Alternatively, it is possible that older clinicians hold a more conservative approach towards any changes made in diagnostic systems, and are thus less inclined to accept new diagnoses. Finally, older clinicians' attitudes may have been shaped, both personally and professionally, in an era where social atmosphere and norms were less likely to support open discussion of harmful addictive behaviors, as had been the case for norms related to alcohol and tobacco (ab)use during much of the 19th and 20th centuries.

Behavioral addictions have been a major research focus in recent years, and some of the data emanating from these studies have been incorporated into recent editions of the DSM and ICD. In our view, validity of various of behavioral addiction diagnoses should be an important focus of ongoing debate, and a central question is whether each specific diagnosis warrants a distinct therapeutic approach. Given the lack of quantifiable biological endpoints (e.g., laboratory testing, brain imaging) in psychiatry, diagnostic validity has always posed a major clinical challenge (38). Consensual validity (39) has been advocated as an interim solution until reliable biological data will be made available for diagnosis. To this end, our results emphasize a consensual validity for behavioral addictions which represent different clinical phenotypes. This is consistent with biological data that indicate similarities between substance and behavioral addictions (19, 20, 40).

We noted a surprisingly low intercorrelation between different subtypes of behavioral addictions (Supplementary Table 5). This finding is inconsistent with a simplistic model whereby an individual psychiatrist will tend to

view different behavioral addictions similarly, as either valid or invalid diagnostic categories. One explanation for this finding could reflect differential values and norms towards various addictive behaviors which co-exist within the same individual (41). While elucidating such intra-individual differences is beyond the scope of the current manuscript, it is possible that various experiences that have shaped an individual's personal life, including his or her own tendency to engage in one or more potentially addictive behavior, lead to bias.

An important limitation of this study includes its reliance on a survey design, which imposes some inherent biases such as selection and non-response bias (42). Nonetheless, we have made efforts to minimize such survey biases by ensuring that the survey be distributed via various technological platforms and that respondents reflected a large spectrum of demographic and work-setting variables representative of the entire nation-wide clinician population. We have also included relevant covariates in our statistical analyses. Nonetheless, several other biases that may be more common in survey designs, such as social desirability bias (43), remain largely unaccounted, warranting replication of our findings using different methodological approaches.

In summary, clinician attitudes towards formalizing diagnoses are critical for instituting adequate treatment. The ability to conduct an accurate clinical diagnostic process with high validity and reliability can facilitate treatment optimization, as in the case of OCD and PTSD reclassification in the DSM-5 edition (2). Based on an overwhelming majority of clinicians endorsing the introduction of behavioral addiction diagnoses in this representative nation-wide survey, we expect that more widespread yet accurate and valid diagnosis of behavioral addiction disorders, backed up by future clinical and biological studies, will enhance both availability and quality of treatment for these common debilitating mental disorders.

Statement of Ethics

The study was approved by the Institutional Review Board (IRB) of the Israel Defense Forces (IDF) and all psychiatrists made informed consent.

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Contributors

Carmel Kalla and Ishai Nir conducted literature searches and provided the literature review. Amit Lotan conducted the statistical analysis and assisted in preparation of the Results and Discussion Sections. Carmel Kalla and Ishai Nir wrote the first draft of the manuscript and all authors contributed to and have approved the final manuscript.

Declaration of Competing Interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

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Supplementary Table 5. Pairwise correlations between attitudes towards addictive behaviors

	gamb	comp	cell	sex
gamb	1.0000 201			
comp	0.3313 0.0000 199	1.0000 200		
cell	0.2757 0.0001 201	0.6399 0.0000 200	1.0000 202	
sex	0.3909 0.0000 200	0.3446 0.0000 198	0.3294 0.0000 200	1.0000 200

Across individuals, pairwise correlations (inter-correlations) between attitude (binary variable, support vs. non-support for inclusion as a distinct behavioral addiction disorder) towards each of the four behavior categories are provided, alongside significance and number of individuals assessed for each pairwise correlation. gamb, gambling; comp, computer gaming; cell, cellular phones/social media; sex addiction.

Supplementary – Methods

The questions regarding addictions constituted one topic out of a larger survey that deals with attitudes towards revisions in diagnostic criteria. English translation of the questionnaire:

► In the updated DSM5 version, gambling disorder was incorporated for the first time as a separate diagnostic entity. Are you familiar with this diagnosis (gambling disorder)?

1. Yes
2. No

► How much you tend to see the definition of gambling addiction as a distinct phenotype?

1. A distinct phenotype
2. Not a distinct phenotype
3. Without position

► Do you tend to use this definition in your clinical work? (If you do not see such patients in your regular work - please answer the question as follows: "If you had encountered a patient who fits the definition of gambling disorder, how much would you tend to use the appropriate definition of the DSM-5)?

(1. not at all ... 5. largely)

► Do you think gambling disorder is an addiction disorder that is similar in its characteristics to substance addiction and should indeed be included in this chapter?

1. Yes
2. No

Remarks:

► In your opinion, should this disorder include Internet gaming disorder?

1. Yes
2. No

Remarks:

► In your opinion, should this chapter include a smartphone addiction?

1. Yes
2. No

Remarks:

► In your opinion, should this chapter include disorders of sex addiction (hypersexuality)?

1. Yes
2. No

Remarks: