FULL-LENGTH REPORT

Journal of Behavioral Addictions 5(3), pp. 448–456 (2016)
DOI: 10.1556/2006.5.2016.057
First published online August 11, 2016

Unpacking the public stigma of problem gambling: The process of stigma creation and predictors of social distancing

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(Received: March 30, 2016; revised manuscript received: June 24, 2016; second revised manuscript received: June 28, 2016; accepted: July 18, 2016)

Background and aims: Public stigma diminishes the health of stigmatized populations, so it is critical to understand how and why stigma occurs to inform stigma reduction measures. This study aimed to examine stigmatizing attitudes held toward people experiencing problem gambling, to examine whether specific elements co-occur to create this public stigma, and to model explanatory variables of this public stigma. *Methods:* An online panel of adults from Victoria, Australia ($N = 2{,}000$) was surveyed. Measures were based on a vignette for problem gambling and included demographics, gambling behavior, perceived dimensions of problem gambling, stereotyping, social distancing, emotional reactions, and perceived devaluation and discrimination. A hierarchical linear regression was conducted. *Results:* People with gambling problems attracted substantial negative stereotypes, social distancing, emotional reactions, and status loss/discrimination. These elements were associated with desired social distance, as was perceived that problem gambling is caused by bad character, and is perilous, non-recoverable, and disruptive. Level of contact with problem gambling, gambling involvement, and some demographic variables was significantly associated with social distance, but they explained little additional variance. *Discussion and conclusions:* This study contributes to the understanding of how and why people experiencing gambling problems are stigmatized. Results suggest the need to increase public contact with such people, avoid perpetuation of stereotypes in media and public health communications, and reduce devaluing and discriminating attitudes and behaviors.

Keywords: public stigma, problem gambling, gambling disorder, stereotyping, social distance, devaluation and discrimination

INTRODUCTION

Public stigma is described as the negative reaction of the general population and the prejudice and discrimination it endorses toward individuals and groups with a stigmatizing condition (Corrigan, 2004; Corrigan, Morris, Michaels, Rafacz, & Rüsch, 2012). Stigma related to problem gambling is identified as a major barrier to problem acknowledgement, disclosure, and help-seeking (Gainsbury, Hing, & Suhonen, 2014; Rockloff & Schofield, 2004; Tavares, Martins, Zilberman, & el-Guebaly, 2002). Stigma has also deleterious effects on self-esteem, self-efficacy, and mental and physical health (Carroll, Rodgers, Davidson, & Sims, 2013; Hing, Nuske, Gainsbury, & Russell, 2016).

Public stigma is formed through a process involving the co-occurrence of labeling, stereotyping, social distancing (or separating), emotional reactions, and status loss and discrimination (Link & Phelan, 2001; Link, Yang, Phelan, & Collins, 2004). Only stereotyping and social distancing have been investigated for problem gambling stigma and only among university student samples (Dhillon, Horch, & Hodgins, 2011; Feldman & Crandall, 2007; Horch & Hodgins, 2008, 2013). Prior analysis of the dataset used in this study found that respondents stigmatized problem gambling at similar levels as schizophrenia and alcoholism (Hing, Russell, Gainsbury, & Nuske, 2015). In our survey, we examined several dimensions of problem gambling that contribute to desired social distance, but these explained only 20.9% of the variance. This study examines additional potential contributors and provides, for the first time, insights into the nature of the stereotypes, social distancing, emotional reactions, and status loss and discrimination associated with problem gambling by a general population sample.

This study aimed to: (a) examine stigmatizing attitudes held toward people experiencing gambling problems in terms of stereotyping, separating, emotional reactions, and status loss and discrimination; (b) examine whether these elements co-occur to create public stigma toward problem gambling; and (c) model a more inclusive set of independent explanatory variables of public stigma toward problem gambling than our previous analysis. Addressing these aims makes a theoretical contribution to the understanding of

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stigma creation process for problem gambling, and an applied contribution through revealing the nature of, and contributors to, problem gambling stigma, which can inform stigma reduction measures.

BACKGROUND

The process of stigma creation

Stigma creation has been described as a process which involves the labeling and judgment of certain individuals according to the perceived presence of a negative attribute, resulting in their devaluation, discrediting, and assumed moral failure (Goffman, 1963). Once labeled with a stigmatizing attribute (e.g., "problem gambler"), stereotypes are applied reflecting beliefs about the social group to which the individual is perceived to belong (Judd & Park, 1993; Scheff, 1966). This labeling and stereotyping emphasize the difference, distinguishing "them" from "us" and result in social distancing by powerful groups from those who are "othered" (Rüsch, Angermeyer, & Corrigan, 2005). Difference is also emphasized through emotional reactions to stigmatized individuals, such as anger, irritation, anxiety, pity, or fear (Link et al., 2004). These reactions can prompt behavioral consequences through status loss and discrimination, such as loss of social acceptance, rejection and disapproval, devaluation and discrimination in interpersonal interactions, and structural discriminations, such as restricted employment and housing opportunities (Corrigan, 1998; Link & Phelan, 2001; Link et al., 2004; Livingston & Boyd, 2010).

Based on Link et al.'s (2004) conceptualization of the stigma creation process, the first hypothesis tested was as follows:

H_1 That stereotyping, emotional reactions, and status loss and discrimination are associated with social distancing from an individual experiencing problem gambling.

Influences on the creation of public stigma

Several factors are thought to influence the formation of mental illness stigma.

Dimensions of the condition. Perceived dimensions of a condition influence whether and to what extent it is stigmatized (Jones et al., 1984). Attribution theory predicts greater stigma when a condition's origin is attributed to an individual's own actions, rather than to accident or biology (Weiner, Perry, & Magnusson, 1988). The danger appraisal hypothesis posits that perceived peril to others and the fear and avoidance response it elicits, determine public stigma (Corrigan, Markowitz, Watson, Rowan, & Kubiak, 2003). Other dimensions include recoverability, with irreversible conditions tending to be being more stigmatized than reversible conditions, concealability where the ability to hide a condition reduces stigma; disruptiveness where conditions that disrupt personal interactions and communication attract greater stigma, and aesthetics where conditions perceived as more repellent are more highly stigmatized (Jones et al., 1984).

Horch and Hodgins (2008) and Dhillon et al. (2011) found that desired social distance increased with perceived dangerousness of disordered gambling. Our research also found that desired social distance increased with perceived dangerousness, and with beliefs that problem gambling is caused by bad character, is non-recoverable, disruptive and noticeable; and decreased with beliefs that it is caused by stressful life circumstances, a genetic/inherited problem, or a chemical imbalance in the brain (Hing et al., 2015). However, this analysis explained limited variance in desired social distance and excluded other possible independent variables identified below. Nevertheless, current evidence supports the following hypothesis:

H_2 That the perceived dimensions of problem gambling are associated with social distancing from an individual experiencing problem gambling.

Contact with the stigmatized population. Increased contact with a stigmatized population can lower stigma (Corrigan et al., 2012; Couture & Penn, 2003) because first-hand experiences counter stereotypes and in-group ignorance about an out-group (Allport, 1954; Pettigrew & Tropp, 2006). Both retrospective and prospective contacts tend to reduce stigmatizing attitudes toward people with mental illness (Couture & Penn, 2003). Increasing contact with stigmatized populations is, therefore, considered an effective stigma reduction strategy (Rüsch et al., 2005).

However, mixed results have been found for problem gambling, with one study finding support for the contact hypothesis (Dhillon et al., 2011) and another finding no relationship (Horch & Hodgins, 2008). The latter study also found no relationship between involvement in gambling activities and desired social distance. The results may have been obscured by the student sample's limited range of involvement with gambling and familiarity with problem gambling. Given previous support for the contact hypothesis, the third hypothesis is as follows:

H_3 That the level of contact with problem gambling is associated with social distancing from an individual experiencing problem gambling.

Similarly, familiarity with gambling is logically hypothesized to be associated with less stigma and vice versa:

H_4 That the level of involvement with gambling is associated with social distancing from an individual experiencing problem gambling.

Demographics. Females tend to be more accepting of stigmatized individuals, depending on whether attitudes or behaviors are assessed (Corrigan & Watson, 2007; Schnittker, 2000). Females hold less stigmatizing attitudes toward depression, but perceived dangerousness and desired social distance show no consistent gender differences (BeyondBlue, 2015), including for problem gambling (Horch & Hodgins, 2008).

Ethnicity may influence stigma. Major cross-national and cross-ethnic differences have been observed in perceived dangerousness and desired social distance for depression

(BeyondBlue, 2015). Non-Caucasians tend to be more stigmatizing about people with mental illness compared to Caucasians (Corrigan & Watson, 2007; Rao, Feinglass, & Corrigan, 2007) and to have harsher attitudes toward problem gambling (Dhillon et al., 2011; Horch & Hodgins, 2008).

Isolated results exist for the influence of other sociodemographic characteristics. Rockloff and Schofield (2004) found that older people were more judgmental of those with gambling disorder, which aligns with findings for mental illness stigma (Alexander & Link, 2003; Link et al., 2004) and depression (BeyondBlue, 2015). Religiosity and political orientation had no association with desired social distance in Horch and Hodgins' (2008) study of problem gambling stigma, although greater mental illness stigma is associated with stronger religiosity (Eisenberg, Downs, Golberstein, & Zivin, 2009) and more conservative political orientation (Alexander & Link, 2003). Education's influence on problem gambling stigma has not been assessed, although mental illness research has generally found more judgmental attitudes associated with lower education (Alexander & Link, 2003; Corrigan & Watson, 2007).

Given general support that stigma toward mental illness varies among different demographic groups, the final hypothesis is as follows:

H_5 That demographic characteristics are associated with social distancing from an individual experiencing problem gambling.

METHODS

Participants

Adults from Victoria, Australia ($N = 2{,}000$, 49.1% male, age: $M = 46.0$, $SD = 16.7$) were recruited through a market research company and completed an online survey. Quotas were applied for age, gender, and metropolitan/non-metropolitan residence, according to the 2011 Census (ABS, 2011). Younger males were difficult to recruit, so these quotas were relaxed late in the survey period. Weighting corrected for differences from the Census for age, gender, and metropolitan/non-metropolitan location. Weighting calculations are reported in Hing et al. (2015).

Response rates

Of 3,895 respondents who started the survey, 2,000 completed it (51.3%). The survey was hosted by Qualtrics, who draw from online panels hosted by multiple providers. As a matter of standard operation, panel providers share their information among themselves to ensure that duplicate respondents are not recruited across panels. Once a participant completed the survey, they were not able to answer the survey a second time.

Procedure

The survey ran from 13–30 March, 2014. Respondents were shown a vignette for a person experiencing problem gambling. This vignette was adapted from Horch and Hodgins (2008) and modified to remove cues about value judgments made by others and to be more inclusive of DSM-5 criteria. It read:

> Dan is a man who lives in your community. During the last 12 months, he has started to gamble more than his usual amount of money. He has even noticed that he needs to gamble much more than he used to in order to get the same feeling of excitement. Several times, he has tried to cut down, or stop gambling, but he can't. Each time he has tried to cut down, he became agitated and couldn't sleep, so he gambled again. He is often preoccupied by thoughts of gambling and gambles more to try to recover his losses. Dan has also lied to his family and friends about the extent of his gambling.

Measures

Demographics and gambling behavior

Demographics. Age, gender, highest educational level, importance of religion/spirituality, main language spoken at home and political orientation (see the Supplementary Material for response options for these and other measures).

Level of contact with problem gambling. A modified Level of Contact Report (Holmes, Corrigan, Williams, Canar, & Kubiak, 1999) asked respondents 12 yes/no questions representing differing levels of contact with problem gambling, from the lowest contact: "I have never observed a person that I was aware had a gambling problem" to the highest contact: "I have had or do currently have a gambling problem." The measure is scored using the highest contact score endorsed (Horch & Hodgins, 2008).

Gambling involvement. A modified Involvement in Gambling Checklist (Horch & Hodgins, 2008) asked how frequently participants engaged in eight gambling forms in the last 12 months.

Problem gambling. The Problem Gambling Severity Index (PGSI; Ferris & Wynne, 2001) measured problem gambling status and has excellent reliability, dimensionality, external/criterion validation, item variability, practicality, applicability, and comparability (McMillen & Wenzel, 2006). Cronbach's α was .94.

Dimensions of problem gambling

Concealability. No existing measure was located, so a single question asked: "How noticeable would Dan's situation be to his family and friends if he hadn't told them about it?"

Course/recoverability. No existing measure was found, so a single question asked: "How strongly do you agree or disagree that people can recover from Dan's situation?"

Disruptiveness. Using three questions from the Key Informants Questionnaire (KIQ), participants rated how seriously they believed the protagonist's situation would affect his ability to (a) live independently, (b) be in a serious relationship, and (c) work or study.

Peril. This was measured using the Perceived Dangerousness Item (Horch & Hodgins, 2008): "How likely is it that Dan would do something violent to other people?"

Origin. Participants rated the likelihood that the condition was due to each possible cause on the six item Perceived Causes Scale (Link, Phelan, Bresnahan, Stueve, & Pescosolido, 1999). These items are treated separately. "God's will" was not endorsed by almost all respondents and was removed from analysis.

The process of public stigma creation

Stereotyping. Ten stereotypes were selected from research into problem gambling stereotypes (Hing, Holdsworth, Tiyce, & Breen, 2014; Horch & Hodgins, 2013) and measured on a 7-point semantic differential scale. Respondents selected where they felt the vignette character sat between two antonyms, e.g., "Rational"–"Irrational". Cronbach's α was .88.

Separating/social distancing. We measured separating with the six item Social Distance Scale (Martin, Pescosolido, & Tuch, 2000). Cronbach's α was .85.

Emotional reactions. Following Angermeyer and Matschinger (1996), three emotional reactions were measured – fear, anger, and pity – based on level of agreement to nine statements (three for each emotion) about their emotional reactions if they met the protagonist in real life, e.g., "Dan would scare me." Fear and anger were correlated (.62) and including both in a regression reduced tolerance levels. They were combined into pity/helping (Cronbach's $\alpha = .75$) and anger/fear (.85).

Status loss and discrimination. An adapted Perceived Devaluation-Discrimination Scale (Link, 1987) with 12 items assessed perceptions of what most other people believe to reduce social desirability bias (Link & Cullen, 1983). Cronbach's α was .84.

Statistical analysis

Data were analyzed using SPSS v22.0 for Mac. There were no missing values. An α of .05 was used throughout.

Ethics

The study procedures were carried out in accordance with the Declaration of Helsinki. The Southern Cross University Human Research Ethics Committee approved the study. All subjects were informed about the study and provided informed consent. Participation was voluntary, anonymous, and confidential.

RESULTS

Descriptive results

Means and standard deviations, as well as correlations between scales, are presented in the Supplementary Material.

Respondents displayed moderately negative stereotypical views of the vignette character (Dan). Most considered that he tended to be impulsive (endorsed by 91.1% of respondents), irresponsible (89.1%), irrational (85.1%), foolish (84.6%), untrustworthy (80.0%), unproductive (74.7%), greedy (61.0%), and anti-social (60.8%). Fewer than half of the respondents considered him to be deviant (48.9%) or immoral (40.1%).

Most respondents were somewhat unwilling to socialize with Dan, reflecting desired social distance. Spending an evening socializing with him attracted most willingness (45.2% probably/definitely willing), followed by having a group household in their neighborhood for people with Dan's condition (36.1%), making friends with him (35.9%), and moving next door (28.8%). Less willingness was indicated to start working with Dan on a project (27.2%). Having Dan marry into their family attracted least willingness (4.5%).

Respondents mostly disagreed feeling anger/fear responses toward Dan and generally endorsed feeling pity/helping emotions. Around three-fifths of respondents felt sorry for him (62.5% agreed/strongly agreed), sympathy for him (60.8%), and the need to help him (55.2%). A minority of respondents felt annoyance (39.1%), apprehension (30.1%), anger (29.1%), uncomfortable (27.6%), scared (12.9%), or disgusted (12.0%).

Respondents reported moderate agreement that Dan would lose social status or face discrimination. Over half disagreed that most people would hire Dan to take care of their children (65.1%) and accept him as a teacher of children (58.0%). More than half agreed that most people would pass over Dan for another job applicant (59.3%). More than two-thirds agreed that most women would be reluctant to date Dan (66.3%). Over three-fifths disagreed that most people would believe Dan to be as trustworthy as the average citizen (63.6%). However, more than half disagreed that most people would think less of Dan for seeking help (59.9%). Responses varied more on the other items, indicating ambivalence among the sample.

Respondents somewhat disagreed that Dan would be perilous to others. They believed his condition would be fairly noticeable, can be recovered from and is quite disruptive. The most likely perceived origin of his condition was stressful life circumstances.

Hierarchical linear regression

To test our hypotheses, a hierarchical linear regression determined which variables were associated with public stigma (desired social distance) against problem gamblers when controlling for all other variables considered above. Pearson's product–moment correlations determined relationships between each variable prior to the regression (see the Supplementary Material). Education was dummy-coded (reference group = year 10 or equivalent). Gender and main language were treated as categorical variables. All other variables were treated as continuous. The lowest reported tolerance for any independent variable was .304. The education dummy variables had tolerances of between .304 and .400, with all other variables having tolerances of at least .605. Thus, no issues with multicollinearity were apparent. No other regression assumptions were violated. An initial regression analysis included PGSI score, which was correlated with gambling involvement ($r = .58$). Neither was significant when both were included, so PGSI was removed.

Variables in the first block were peril to others, concealability, course/recoverability, disruptiveness, and the five origin variables. All were significantly related to stigma except for origin 5 (the way he was raised), indicating

Table 1. Regression coefficients and model summary information

Model	Independent variable	Unstd. coefficient (*SE*)	Std. coefficient	95% CI (LL:UL)	sr^{2a}
1	Intercept	1.810 (.077)		1.659:1.962	
	Peril	**.146 (.017)**	**.190*** **	**.112:.180**	**.028**
	Concealability	**.030 (.015)**	**.042***	**.000:.060**	**.002**
	Course/recoverability	**−.170 (.019)**	**−.183*** **	**−.208:−.133**	**.032**
	Disruptiveness	**.120 (.022)**	**.118*** **	**.076:.164**	**.011**
	Origin 1	**.155 (.016)**	**.220*** **	**.124:.185**	**.038**
	Origin 2	**−.047 (.016)**	**−.068** **	**−.079:−.015**	**.003**
	Origin 3	**−.070 (.017)**	**−.084*** **	**−.104:−.036**	**.006**
	Origin 4	**−.049 (.016)**	**−.072** **	**−.081:−.017**	**.004**
	Origin 5	−.005 (.016)	−.007	−.036:.026	<.001
	$R^2 = .209$, $F(9, 1990) = 58.48$***				
2	Intercept	1.012 (.094)		.827:1.197	
	Peril	**.051 (.015)**	**.066** **	**.020:.081**	**.003**
	Concealability	**.029 (.013)**	**.041***	**.003:.055**	**.001**
	Course/recoverability	**−.106 (.017)**	**−.113*** **	**−.139:−.073**	**.012**
	Disruptiveness	.036 (.020)	.035	−.004:.076	.001
	Origin 1	**.060 (.014)**	**.086*** **	**.032:.088**	**.005**
	Origin 2	**−.031 (.014)**	**−.045***	**−.058:−.003**	**.001**
	Origin 3	**−.038 (.015)**	**−.045***	**−.068:−.008**	**.002**
	Origin 4	−.027 (.014)	−.039	−.054:.000	.001
	Origin 5	−.023 (.014)	−.033	−.050:.003	.001
	Stereotyping	**.151 (.018)**	**.164*** **	**.115:.187**	**.019**
	SLD[b]	**.321 (.025)**	**.246*** **	**.272:.369**	**.049**
	Anger/fear	**.201 (.021)**	**.208*** **	**.161:.241**	**.028**
	Pity/helping	**−.221 (.018)**	**−.226*** **	**−.257:−.186**	**.042**
	$R^2 = .422$, $F(13, 1986) = 111.73$***, $\Delta R^2 = .213$, $F\Delta(4, 1986) = 183.33$***				
3	Intercept	.897 (.120)		.661:1.132	
	Peril	**.051 (.016)**	**.066** **	**.020:.081**	**.003**
	Concealability	.025 (.013)	.035	−.001:.050	.001
	Course/recoverability	**−.098 (.017)**	**−.105*** **	**−.130:−.065**	**.010**
	Disruptiveness	**.046 (.021)**	**.045***	**.006:.086**	**.001**
	Origin 1	**.064 (.015)**	**.092*** **	**.036:.093**	**.006**
	Origin 2	**−.031 (.014)**	**−.044***	**−.058:−.003**	**.001**
	Origin 3	**−.030 (.015)**	**−.036***	**−.061:.000**	**.001**
	Origin 4	−.025 (.014)	−.037	−.052:.003	.001
	Origin 5	−.022 (.014)	−.031	−.049:.006	.001
	Stereotyping	**.148 (.019)**	**.161*** **	**.112:.185**	**.018**
	SLD[b]	**.318 (.025)**	**.243*** **	**.269:.366**	**.047**
	Anger/fear	**.199 (.021)**	**.206*** **	**.158:.239**	**.027**
	Pity/helping	**−.223 (.018)**	**−.228*** **	**−.259:−.187**	**.042**
	Gender	−.015 (.026)	−.010	−.066:.037	<.001
	Age	**.002 (.001)**	**.049***	**.001:.004**	**.002**
	Importance of religion	**−.017 (.006)**	**−.047** **	**−.030:−.004**	**.002**
	Education				
	Year 10 vs. Year 12	.038 (.051)	.020	−.063:.139	<.001
	Year 10 vs. Diploma	.042 (.050)	.024	−.057:.140	<.001
	Year 10 vs. UG	.066 (.050)	.041	−.032:.165	<.001
	Year 10 vs. PG	**.121 (.054)**	**.060***	**.016:.227**	**.001**
	Main language	**.108 (.048)**	**.040***	**.013:.202**	**.001**
	Political orientation	.018 (.010)	.032	−.002:.037	.001
	$R^2 = .430$, $F(22, 1977) = 67.80$***, $\Delta R^2 = .008$, $F\Delta(9, 1977) = 2.94$**				
4	Intercept	1.085 (.125)		.840:1.329	
	Peril	**.051 (.016)**	**.067** **	**.021:.082**	**.003**
	Concealability	.025 (.013)	.035	−.001:.050	.001
	Course/recoverability	**−.100 (.017)**	**−.107*** **	**−.132:−.067**	**.010**
	Disruptiveness	**.049 (.020)**	**.048***	**.009:.089**	**.002**
	Origin 1	**.068 (.015)**	**.096*** **	**.039:.096**	**.006**
	Origin 2	**−.030 (.014)**	**−.043***	**−.057:−.003**	**.001**

Table 1. (Continued)

Model	Independent variable	Unstd. coefficient (*SE*)	Std. coefficient	95% CI (LL:UL)	sr^{2a}
	Origin 3	**−.031 (.015)**	**−.038***	**−.062:−.001**	**.001**
	Origin 4	−.020 (.014)	−.030	−.048:.007	.001
	Origin 5	−.020 (.014)	−.028	−.047:.007	.001
	Stereotyping	**.142 (.018)**	**.154*****	**.105:.178**	**.017**
	SLD[b]	**.303 (.025)**	**.232*****	**.254:.352**	**.042**
	Anger/fear	**.199 (.021)**	**.206*****	**.159:.239**	**.027**
	Pity/helping	**−.222 (.018)**	**−.227*****	**−.258:−.186**	**.042**
	Gender	−.033 (.026)	−.022	−.085:.019	<.001
	Age	**.002 (.001)**	**.047***	**.000:.004**	**.002**
	Importance of religion	**−.015 (.006)**	**−.043***	**−.028:−.003**	**.002**
	Education				
	Year 10 vs. Year 12	.027 (.051)	.015	−.073:.128	<.001
	Year 10 vs. Diploma	.039 (.050)	.023	−.058:.137	<.001
	Year 10 vs. UG	.054 (.050)	.033	−.044:.152	<.001
	Year 10 vs. PG	**.108 (.054)**	**.054***	**.003:.213**	**.001**
	Main language	**.095 (.048)**	**.035***	**.001:.189**	**.001**
	Political orientation	.018 (.010)	.032	−.002:.037	.001
	Level of contact	**−.013 (.003)**	**−.065*****	**−.019:−.006**	**.004**
	Gambling involvement	**−.012 (.004)**	**−.053****	**−.020:−.004**	**.002**
	$R^2 = .438$, $F(24, 1975) = 64.15$***, $\Delta R^2 = .008$, $F\Delta(2, 1975) = 14.14$***				

Note. Origin 1 = bad character, origin 2 = chemical imbalance in his brain, origin 3 = stressful circumstances, origin 4 = genetic/inherited problem, origin 5 = how he was raised. Bold text indicates a statistically significant independent variable.
[a]sr^2 is the squared semi-partial correlation coefficient for each independent variable, indicating unique proportion of variance in the separating scale accounted for by each independent variable when controlling for other independent variables within the model. [b]SLD = status loss and discrimination variable.
*<.05, **<.01, ***<.001 (two-tailed tests).

overall support for H_2. This model was significant and accounted for 20.9% of the variance in the social distance scale, as previously reported in Hing et al. (2015).

The second block added stereotyping, emotional reactions, and status loss and discrimination. All were significant, with higher stigma associated with people who (a) held more negative views of the protagonist, (b) believed that the protagonist would lose social status because of their condition (c) would feel more anger or fear toward the protagonist, and (d) would feel less pity or desire to help the protagonist. These variables explained an additional 21.3% of variance in the social distance scale, supporting H_1.

To determine whether the above independent variables remained significant when controlling for individual differences, the third block added demographic variables. They explained an additional .8% of variance. Older respondents, less religious people, postgraduates, and those not speaking English at home displayed higher stigma; however, these variables did not explain much unique variance and may only be significant due to the large sample size. They should be interpreted with caution and lend only marginal support for H_5. Notably, including these variables did not change the significance of any stigma creation process variables.

The final block added level of contact with problem gambling and gambling involvement. These variables explained an additional .8% of variance and both were significant in the same direction as the correlations, thus supporting H_3 and H_4. Inclusion of these variables did not change the significance of the stigma creation process variables.

In total, the model explained 43.8% of the variance in desired social distance. Variables accounting for the most unique variance were the four variables related to the process of stigma creation: (a) (lack of) pity/helping emotion (4.2%); (b) status loss and discrimination (4.2%); (c) anger/fear (2.7%); and (d) stereotyping (1.7%; Table 1). These particular variables displayed the strongest associations with the separating dependent variable in all of the blocks of the model in which they were present.

DISCUSSION

Results relating to the first aim of the study confirm that people with gambling problems are socially stigmatized, attracting negative stereotypes, social distancing, emotional reactions, and status loss and discrimination. These findings largely align with previous research (Dhillon et al., 2011; Feldman & Crandall, 2007; Horch & Hodgins, 2008, 2013).

The stereotypes endorsed in this study suggest that failure to control gambling is interpreted as a failing of personal qualities as well as behavior. While these stereotypes may have some basis in truth (Horch & Hodgins, 2013), people have a right to be judged by their individual behavior (Schomerus et al., 2011). People greatly fear being labeled "a problem gambler" because demeaning stereotypes may obscure their good qualities and be internalized as damaging self-stigma (Carroll et al., 2013; Hing et al., 2016). However, stereotypes of "problem gamblers" are probably socially constructed from transmitted cultural

beliefs rather than cognitively derived from direct interactions. Such stereotypes are more resistant to contradictory evidence and education campaigns; increased contact with the stigmatized population appears more promising (Corrigan, 1998). Avoiding perpetuating these stereotypes through media reports and images, including in public health and gambling help campaigns, may also assist in reducing stigma.

Desired social distance from people with gambling problems was also pronounced, as previously found among students (Dhillon et al., 2011; Feldman & Crandall, 2007; Horch & Hodgins, 2008). Willingness to socialize with Dan decreased as the closeness of the relationship increased, consistent with stereotypes of being irresponsible, irrational, and untrustworthy. Thus, people with gambling problems are likely to face substantial social rejection, as documented in qualitative research (Carroll et al., 2013; Hing et al., 2016).

Surprisingly, Dan attracted more pity and intention to help, than fear or anger. Nevertheless, even sympathetic attitudes can be stigmatizing because they emphasize difference (Link et al., 2004) and "foster pity not parity" (Corrigan, 2004, p. 621). Viewing people as pitiable may be disempowering, as it assumes they are incapable and need assistance (Corrigan, Watson, Byrne, & Davis, 2005). Individuals experiencing gambling problems have expressed aversion to being pitied, wanting instead to be treated like everybody else (Hing et al., 2016).

Discrimination and status loss were expected by most respondents in employment, child minding and relationships. Substantial minorities also expected most people to think less of the person and their opinions. Research into enacted devaluation and discrimination is inconclusive, because many people keep the problem well hidden (Carroll et al., 2013). Hing et al.'s (2016) participants relayed general impressions of being watched, judged, and demeaned, but few could provide concrete examples because their problem remained undisclosed. This widespread secrecy to avoid stigma (Hing et al., 2016) appears well-founded, given public expectations of substantial status loss and discrimination. However, this secrecy also deters seeking help and social support. Devaluing and discriminating attitudes and behaviors need reducing to increase disclosure and help-seeking rates, while increasing options for anonymous forms of help and for early intervention may help people overcome the stigma barrier to seek treatment and support.

The second research aim was to examine whether stereotyping, separating, emotional reactions, and status loss and discrimination co-occur in the creation of public stigma toward problem gambling. The regression supported the applicability of Link et al.'s (2004) process model to problem gambling stigma. Results suggest that tackling all process elements may be necessary to diminish social rejection.

With consideration of the third aim, as found by Hing et al. (2015), based on the same sample, perceived dimensions of problem gambling were significantly associated with desired social distance. After controlling for all other variables, most dimensions remained significant. Desired social distance increased with perceptions that problem gambling is caused by bad character, is perilous, non-recoverable and disruptive, but decreased with perceptions that it is due to stressful life circumstances or a chemical brain imbalance. Given their substantial associations with desired social distance, these perceived dimensions of problem gambling can inform stigma reduction measures. As discussed by Hing et al. (2015), community education and increased contact with people with gambling problems could be used to challenge assumptions that problem gambling is caused by bad character, that affected people are likely to be violent to others, and that people cannot recover from the condition.

Consistent with previous research (Pescosolido, 2013), individual difference variables explained little unique variance in desired social distance so provided little guidance for targeting anti-stigma measures. Having less contact with problem gambling and less involvement in gambling had somewhat stronger associations, but again explained little variance. Nevertheless, increasing community contact with problem gambling may reduce negative stereotypes, unhelpful emotional responses, social rejection, and devaluing and discriminating attitudes and behaviors, as widely found in mental illness research (Alexander & Link, 2003; Couture & Penn, 2003).

Additional stigma reduction strategies may be identified from other fields, especially addictions, given that gambling disorder is classified as an addiction (American Psychiatric Association, 2013) and widely perceived as such by the general public (Hing et al., 2015). For example, some researchers have advocated the reconceptualization of substance use disorders as heavy use over time (Rehm et al., 2013; Rehm, Probst, Kraus, & Lev-Ran, 2014). This characterization, they argue, is less stigmatizing than the label of addiction, because it presents the behavior as just one end on a continuum of use (Rehm et al., 2013). As most adults participate in some form of gambling each year (Hing et al., 2014; Wardle et al., 2011; Williams, Volberg, & Stevens, 2012), most could place themselves somewhere on a continuum of use for gambling. This could lower the stigma of heavy use, focus efforts on reducing heavy use, and free the behavior from the moral and disease connotations associated with the label of addiction (Rehm et al., 2013, 2014).

This study has some limitations. The representative but non-random sample may have introduced bias. Measures relied on how accurately the vignette portrayed problem gambling. The vignette featured only a male character, so the current results need testing for females. Some social desirability bias is also expected when researching stigma. The study was cross-sectional, so no causal inferences are made. Some measures were not validated. Those without access to the Internet were unable to participate in the online survey; however, this limitation is partially mitigated as approximately 85% of Australian adults have Internet access (ABS, 2016).

CONCLUSION

This study has "unpacked" the public stigma associated with problem gambling through providing insights into its

nature, identifying elements contributing to its creation, and examining associations with desired social distance. The results leave little doubt that "problem gamblers" attract substantial negative stereotypes, social distancing, emotional reactions, and status loss and discrimination. These process elements were key independent variables that were associated with desired social distance, as were perceived dimensions of problem gambling, including that it is caused by bad character, is perilous, non-recoverable, and disruptive.

This study has made an important contribution to the understanding of how and why people experiencing gambling problems are stigmatized. Results suggest the need to increase public contact with such people, avoid perpetuation of stereotypes in media and public health communications, reduce devaluing and discriminating attitudes and behaviors, and consider whether current conceptualizations of problem gambling are damaging. Given the substantial stigma associated with problem gambling revealed in this study, research is urgently needed into stigma reduction strategies for problem gambling.

Funding sources: Financial support for this study was received from the Victorian Responsible Gambling Foundation.

Authors' contribution: All authors contributed to the study concept and design, and interpretation of data. AMTR conducted the statistical analysis. NH and AMTR obtained funding for the study. NH and AMTR drafted the paper and all authors critically reviewed and refined it. All authors had full access to all data in the study and take responsibility for the integrity of the data and the accuracy of the data analysis.

Conflict of interest: The authors declare that they have each received research funding from beneficiaries of gambling, including government agencies and industry operators.

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