The development of the mobile version of the gambling craving coping application

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Today’s topics

- Internet & online intervention for addiction
- Our research (research scheme)
- Challenges for the future in gambling treatment

Internet and online intervention for addiction

In Giroux et al. (2017) review

Online and Mobile Interventions for Problem Gambling, Alcohol, and Drugs: A Systematic Review

Isabelle Giroux[1], Annie Goulet[1], Jonathan Mercier[1], Christian Jacques[1] and Stéphane Bouchard[2]*

- 18 of about 4,000 studies were included
  inclusion criteria: published between 1991 to 2015
  used a research design
- The most of studies included in this review were intervention for alcohol and substance abuse
- The majority of theoretical models were based on cognitive-behavioral approaches

Internet and online intervention for gambling

In van der Maas et al. (2019) review

JMIR Publications 20 YEARS
Advancing Digital Health Research

JMIR Mental Health

Internet-Based Interventions for Problem Gambling: Scoping Review

Mark van der Maas[1], PhD; Jing Shi[1,2], MSc, OT Reg (MB); Tara Elton-Marshall[1,3,4,5], PhD; David C Hodgins[6], PhD; Sherald Sanchez[1], BA; Daniela SS Lobo[7,8], MD, PhD, FRCPC; Sylvia Hagopian[9], BA; Nigel E Turner[1,3], PhD

- 27 of about 610 studies were included
  inclusion criteria: published between 2007 to 2017

- The common form of intervention types was one-on-one online counseling and websites.
- Cognitive behavioral therapy was commonly used by telephone, e-mail contact.

Internet and online intervention for gambling

For the effectiveness

- In 3 RCT, the internet based intervention found significant improvement over non-treatment control

J Gambl Stud (2017) 33:993–1010
DOI 10.1007/s10899-016-9666-y

ORIGINAL PAPER

Internet-Based Delivery of Cognitive Behaviour Therapy Compared to Monitoring, Feedback and Support for Problem Gambling: A Randomised Controlled Trial

Leanne M. Casey[1] · Tian P. S. Oei[2,3,4] · Namrata Raylu[2] · Katherine Horrigan[5] · Jamin Day[6] · Michael Ireland[6] · Bonnie A. Clough[6]

SOGS						
	I-MFSvsWL*TIME	**−0.70**	0.12	<.001	−0.93	−0.46
	I-CBTvsWL*TIME	**−1.10**	0.13	<.001	−1.35	−0.85
	I-CBTvsI-MFS*TIME	**−0.40**	0.13	.003	−0.67	−0.14
Gambling amount						
	I-MFSvsWL*TIME	**−81.09**	38.05	.034	−156.14	−6.04
	I-CBTvsWL*TIME	**−84.05**	38.05	.028	−159.09	−9.01
	I-CBTvsI-MFS*TIME	−2.96	38.17	.938	−78.23	72.31
Gambling frequency						
	I-MFSvsWL*TIME	**−0.46**	0.06	<.001	−0.59	−0.34
	I-CBTvsWL*TIME	**−0.51**	0.07	<.001	−0.64	−0.38
	I-CBTvsI-MFS*TIME	−0.05	0.07	.490	−0.19	0.09

Contents lists available at ScienceDirect
Computers in Human Behavior
journal homepage: www.elsevier.com/locate/comphumbeh

The efficacy of a web-based gambling intervention program for high school students: A preliminary randomized study

Natale Canale[a,*], Alessio Vieno[a], Mark D. Griffiths[b], Claudia Marino[a], Francesca Chieco[a], Francesca Disperati[a], Stefano Andriolo[a], Massimo Santinello[a]

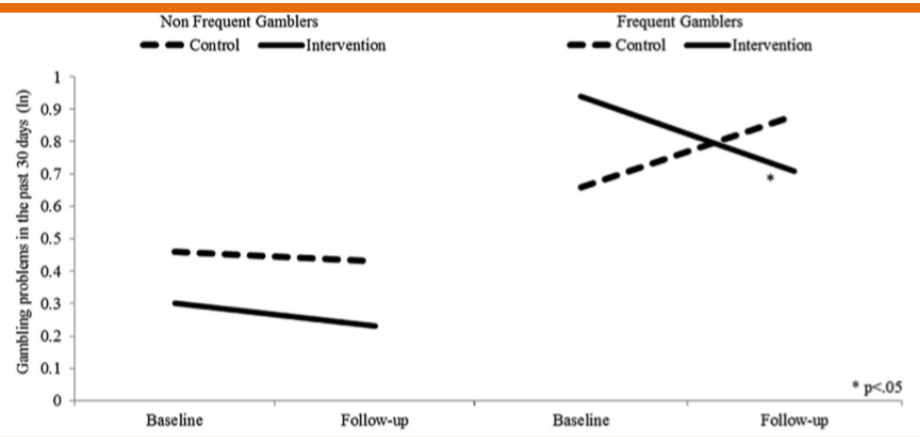
[a] Department of Developmental and Social Psychology, University of Padova, Italy
[b] International Gaming Research Unit, Psychology Division, Nottingham Trent University, UK

PsycARTICLES: Journal Article

Randomized trial of internet-delivered self-help with telephone support for pathological gamblers.

Carlbring, Per,Smit, Filip

Journal of Consulting and Clinical Psychology, Vol 76(6), Dec 2008, 1090-1094



Internet and online intervention for gambling

In van der Maas et al. (2019) review

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Internet-Based Interventions for Problem Gambling: Scoping Review

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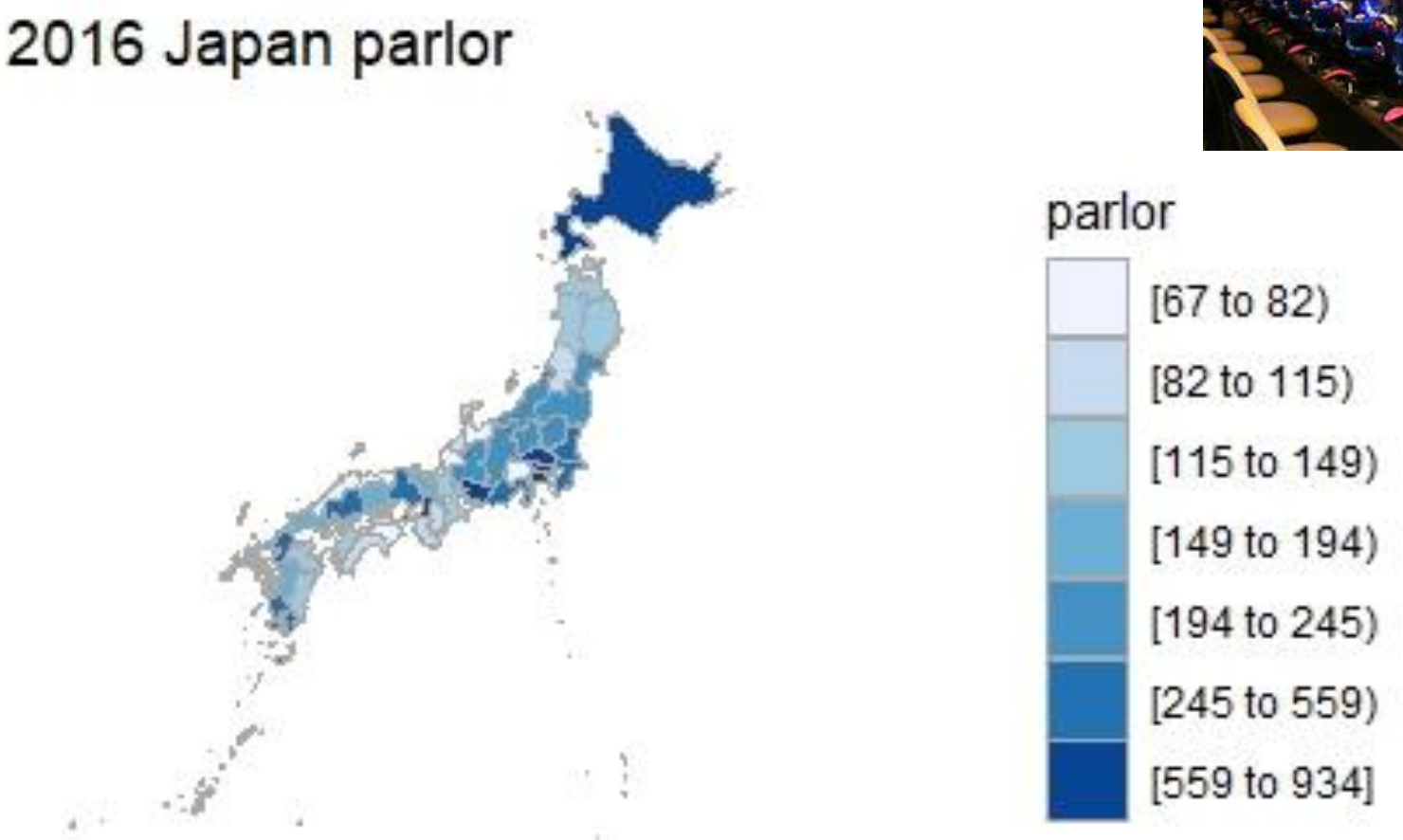
- Used technology included e-mail (for feedback), text communication (real-time chat and discussion board), internet therapy program and web-based educational resources, and so on.

The difficulty of translated version of existing intervention

In Japan

- We have huuuuuuge gambling venue (ex. over 10,000 pachinko parlor)



The difficulty of translated version of existing intervention

In Japan

- We can bet on a variety of races held throughout Japan (ex. horse racing, motor boat race) continuous 365 days
- The races' starting time is the same all the time

東京競馬場			函館競馬場			阪神競馬場		
1R	3歳未勝利 10:10出走 1400m 14頭	競馬予想 1 件	1R	3歳未勝利 09:50出走 1200m 15頭	競馬予想 1 件	1R	3歳未勝利 10:00出走 1800m 12頭	競馬予想 2 件
2R	3歳未勝利 10:40出走 1600m 11頭	競馬予想 1 件	2R	3歳未勝利 10:20出走 1700m 10頭	競馬予想 1 件	2R	3歳未勝利 10:30出走 1200m 12頭	競馬予想 1 件
3R	3歳未勝利 11:10出走 1300m 16頭	競馬予想 1 件	3R	3歳未勝利 10:50出走 1000m 10頭	競馬予想 1 件	3R	3歳未勝利 11:00出走 1800m 11頭	競馬予想 1 件
4R	3歳未勝利 11:40出走 1800m 14頭	競馬予想 1 件	4R	3歳未勝利 11:20出走 1800m 12頭	競馬予想 1 件	4R	障害3歳以上未勝利 11:30出走 2970m 10頭	競馬予想 1 件
5R	メイクデビュー東京 12:30出走 1600m 13頭	競馬予想 1 件	5R	メイクデビュー函館 12:10出走 1200m 10頭	競馬予想 1 件	5R	メイクデビュー阪神 12:20出走 1600m 11頭	競馬予想 1 件
6R	メイクデビュー東京	競馬予想	6R	3歳未勝利	競馬予想	6R	3歳未勝利	競馬予想

The difficulty of translated version of existing intervention

In Japan

- Gamblers in Japan need to cope with huge triggers in relation to a specific pattern of location and time point
- Need ecological momentary intervention centering on stimulus control
- More than 70% of Japanese have the smartphone

Our Research

- Goal

Development of the mobile application for assistance to cope with gambling craving

- Main Programmer of application:
  Tatsuhito Hasegawa (Fukui University)

Development of the mobile application for assistance to cope with gambling craving

1: pre-registration

Users register specific place and/or time that they used to develop their gambling craving

2 : alert function

In approaching registered place or time, they would get the alert notification.

3 : monitoring function

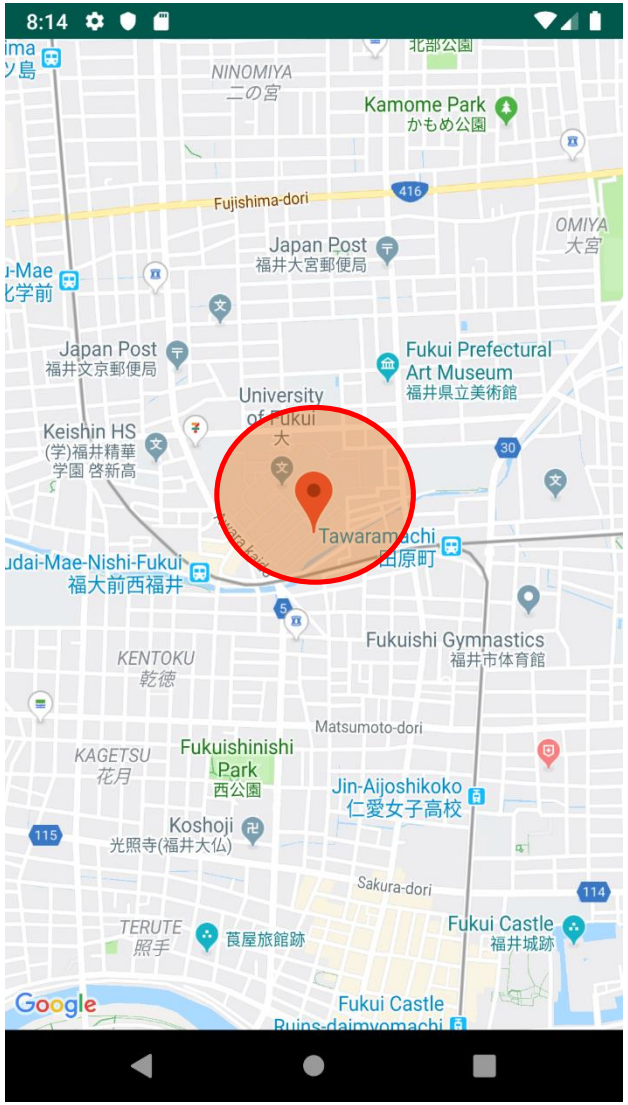
They would assess gambling craving level .

4 : Coping function

They will select the way of coping to moderate and distract gambling craving.

Ex. Youtube, call-enabled application

1 : pre-registration
(identifying high-risk situations)



Register location

Users register their high-risk location

- Locational information: use a google map.
- Set a variety of high-risk locations for gambler

- Plan to set a circle of radious X m as risk areas

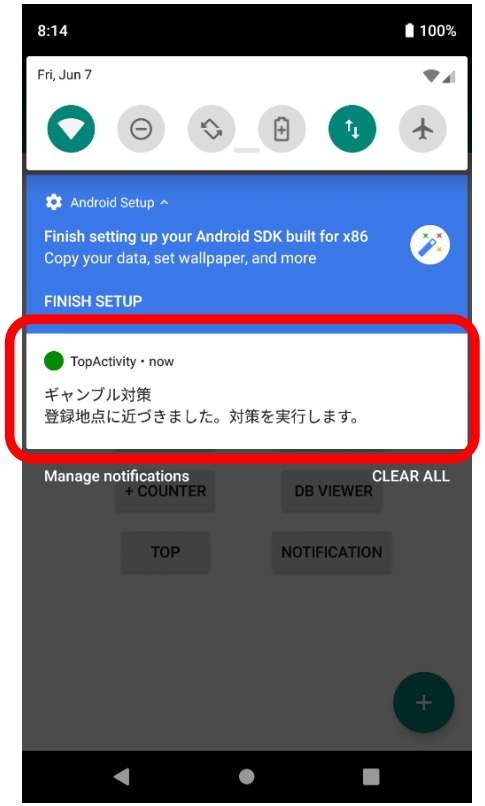
1 : pre-registration
(identifying high-risk situations)

Register time points

Users register their high-risk time

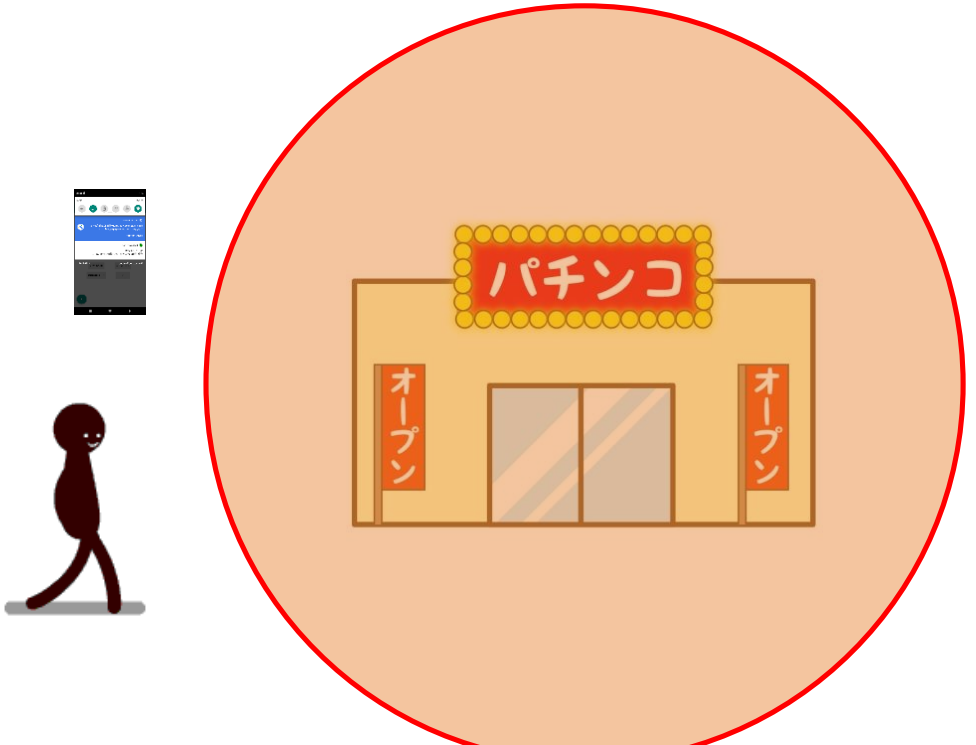
- Use a alarm setting function.
- Set a variety of high-risk time points for gambler

2 : alert function



Pop-up notification

When users (gamblers) approached on a high-risk locations and/or time points, he would get a notification.



3 : monitoring function

Assessment for craving

When users would get a notification on the high-risk situations, they assess the craving level (0 to 100).

Moreover, they assess the mood (negative = 0 to 100 = positive) by the moment.

4 : coping function

The choice of coping behavior

After users assess the craving and mood in the moment, pre-registered coping behaviors would be presented for controlling the craving and distraction.

Possible option：
Show the partner’s and/or significant other’s phone number

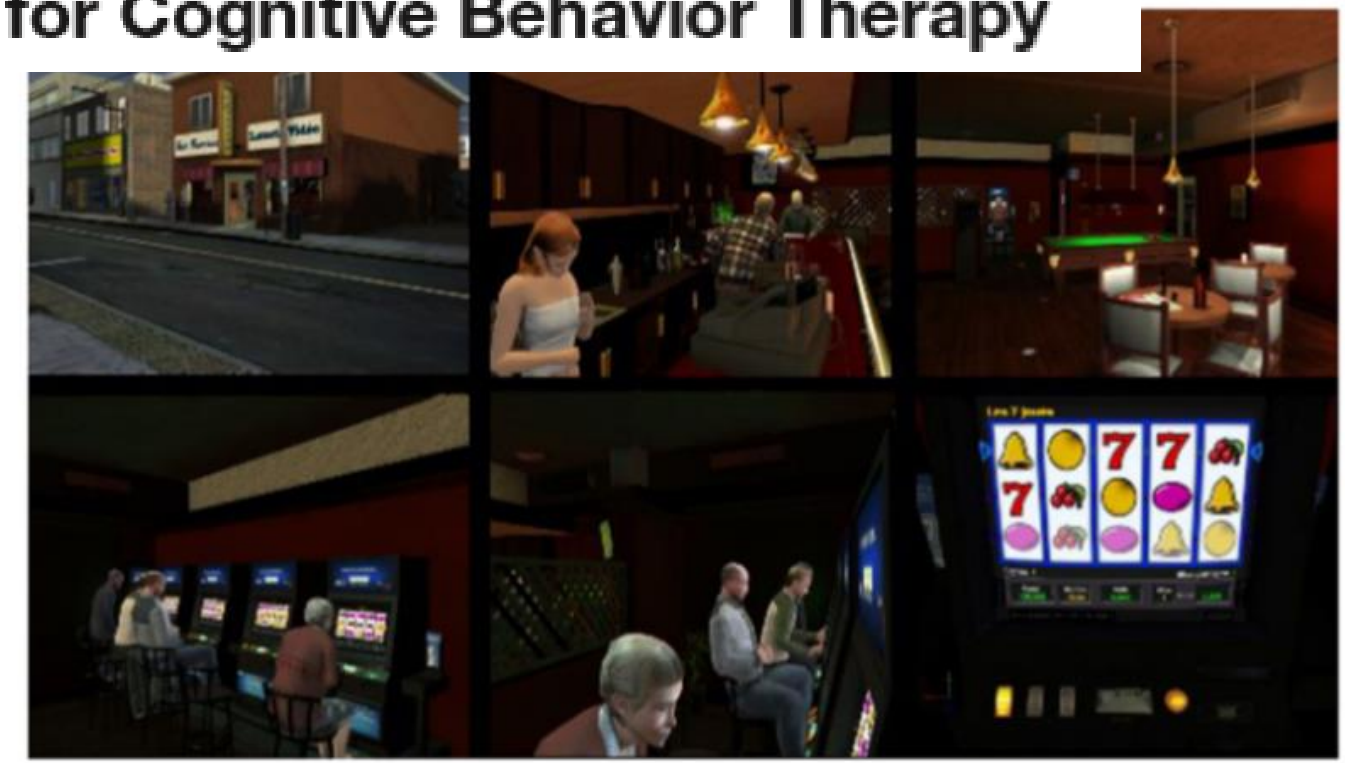
Show the photo in their gallery

Challenges for the future in gambling treatment

Suggestion from the Bouchard et al. (2018)

frontiers in Psychiatry

Using Virtual Reality in the Treatment of Gambling Disorder: The Development of a New Tool for Cognitive Behavior Therapy



Challenges for the future

GCS subscales	Scrabble™		Real VLT		Virtual reality (VR) *At Fortunes*	
	Occasional gamblers	Frequent gamblers	Occasional gamblers	Frequent gamblers	Occasional gamblers	Frequent gamblers
Anticipation of fun	10.47 (6.30)	10.29 (4.17)	7.39 (4.46)	12.68 (5.27)	8.61 (4.25)	12.12 (5.07)
Desire to gamble	5.92 (3.95)	6.46 (5.36)	3.94 (2.33)	7.18 (5.32)	4.44 (2.42)	7.32 (5.59)
Relief from negative	4.0 (3.25)	4.54 (4.51)	3.0 (0)	4.46 (4.43)	3.08 (0.5)	4.86 (5.37)

Measures	Pre		Post 2 weeks	
	VR-S	Imag-S	VR-S	Imag-S
CPGI	19.86 (3.84)	20.09 (2.55)	11.21 (9.64)	10.82 (8.32)
DIG (*n*. Dx criteria)	7.00 (1.96)	8.00 (0.82)	1.29 (1.20)	1.10 (1.66)
GRCS-total	81.36 (27.09)	87.18 (24.33)	30.07 (7.62)	26.18 (4.33)

Repeated measures ANOVA		
Time $F_{(1,23)}$	Cond $F_{(1,23)}$	Interaction $F_{(1,23)}$
19.62***	0.002	0.02
193.08***	0.91	1.71
131.69***	0.03	0.99

We need more collaboration with engineering

Take home messages

- The characteristics of gambling venue in Japan
- The introduction of application for coping with gambling craving
- Need to collaboration in gambling treatment