

Journal Information

Journal ID (publisher-id): jgi

ISSN: 1910-7595

Publisher: Centre for Addiction and Mental Health

Article Information

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Received Day: 30 Month: 4 Year: 2003

Accepted Day: 15 Month: 6 Year: 2004

Publication date: March 2005

Publisher Id: jgi.2005.13.7

DOI: 10.4309/jgi.2005.13.7

A study of superstitious beliefs among bingo players

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[This article prints out to about 14 pages.]

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Contributors: CB collected and analysed the data. MG wrote the paper and also carried out some of the statistical analysis.

Competing interests: No competing interests are declared for either author.

Ethical approval: Ethics approval was given by the NTU Psychology Ethics Committee in November 2001 for “An investigation into beliefs and attitudes of bingo players.”

Funding: Self-funded by NTU

Abstract

This study was conducted in order to examine the beliefs players have regarding superstition and luck and how these beliefs are related to their gambling behaviour. A self-completion questionnaire was devised and the study was carried out in a large bingo hall in Nottingham, over four nights. 412 “volunteer” bingo players completed the questionnaires. Significant relationships were found in many areas. Many players reported beliefs in luck and superstition; however, a greater percentage of players reported having “everyday” superstitious beliefs, rather than those concerned with bingo.

Introduction

According to [Vyse \(1997\)](#), the fallibility of human reason is the greatest single source of superstitious belief. Sometimes referred to as a belief in “magic,” superstition can cover many spheres such as lucky or unlucky actions, events, numbers, and/or sayings; a belief in astrology, the occult, the paranormal, or ghosts ([Jahoda, 1971](#)). However, perhaps a working definition within our Western society could be, “a belief that a given action can bring good luck or bad luck when there are no rational or generally acceptable grounds for such a belief” ([Thalbourne, 1997](#), p. 221).

It has been suggested that approximately one third of the U.K. population are superstitious ([Campbell, 1996](#)). The most often reported superstitious behaviours are (i) avoiding walking under ladders, (ii) touching wood, and (iii) throwing salt over one's shoulder ([Campbell, 1996](#)). There is also a stereotypical view that there are certain groups within society who tend to hold more superstitious beliefs than what may be considered the norm. These include those involved with sport, the acting profession, miners, fishermen, and gamblers. Many studies have been undertaken using self-report methods. However, participants may be unwilling to publicly admit to their private beliefs due to a fear of being ridiculed or considered irrational. This contradiction between what individuals say and do has been investigated by [Campbell \(1996\)](#), who concludes that the majority of the population have “half-beliefs.” He suggests that people are basically rational and do not really believe in the effects of superstition. However, in times of uncertainty, stress, or perceived helplessness, they seek to regain personal control over events by means of superstitious belief.

One explanation for how we learn these superstitious beliefs has been suggested by [Skinner's \(1948\)](#) work with pigeons. While waiting to be fed, Skinner's pigeons

adopted some peculiar behaviours. The birds appeared to see a causal relationship between receiving the food and their own preceding behaviour. However, it was merely coincidental conditioning. There are many analogies in the human world—particularly among gamblers. For instance, if a gambler blows on the dice during a game of craps and subsequently wins, the superstitious belief is reinforced through the reward of winning. Another explanation is that as children we are socialized into believing in magic and superstitious beliefs. Although many of these beliefs dissipate over time, children also learn by watching and modelling their behaviour on that of others. Therefore, if their parents or peers touch wood, carry lucky charms, and do not walk under ladders, then children are more likely to imitate that behaviour, and some of these beliefs may be carried forward to later life ([Vyse, 1997](#)).

[Darke and Freedman \(1997\)](#) suggest that lucky events are, by definition, determined entirely by chance. However, they go on to imply that, although most people would agree with this statement on an intellectual level, many do not appear to behave in accordance with this belief. [Wagenaar \(1988\)](#) has proposed that in the absence of a known cause we tend to attribute events to abstract causes like luck and chance. He goes on to differentiate between luck and chance and suggests that luck is more related to an unexpected positive result whereas chance is related to surprising coincidences ([Wagenaar, 1988](#)). [Weiner \(1986\)](#) suggests that luck may be thought of as the property of a person, whereas chance is thought to be concerned with unpredictability. Gamblers appear to exhibit a belief that they have control over their own luck. They may knock on wood to avoid bad luck or carry an object such as a rabbit's foot for good luck ([Darke & Freedman, 1997](#)). [Langer \(1983\)](#) argued that a belief in luck and superstition cannot only account for causal explanations when playing games of chance, but may also provide the desired element of personal control.

Bingo is a game of chance, involving no skill or choice judgements. The very little research conducted on bingo has mostly been from a sociological perspective. When outcomes are uncertain or unpredictable, many gamblers appear to turn to superstition and/or luck in order to feel in “control” of the situation. This has also been shown to be the case concerning bingo. [Dixey \(1987\)](#) found many players had ritual routines concerned with superstitious belief, such as buying cards for the game in a particular order, sitting in the same seat, wearing lucky clothes, and using specific pens. [King \(1990\)](#) suggested that the use of superstitious strategies in order to win implied both skill and some degree of control over the outcome of the game.

From the preceding literature, it is clear that bingo appears to be an under-researched area. Furthermore, almost all of the research is over a decade old. Therefore the following study was conducted in order to examine the beliefs

players have regarding superstition and luck, and how these beliefs are related to their gambling behaviour.

Method

Participants: 412 bingo players (354 females and 58 males; mean age 44.8 years) took part in the study. This was an opportunity sample of players (i.e., those agreeing to take part when asked), with no controls over gender or age. In total, on the evenings over which the research was conducted, 1547 players actually attended the bingo sessions (some of whom were repeat attendees). Of these, approximately one quarter agreed to take part, although not everyone was approached due to time demands.

Measures: A self-completion questionnaire was devised which asked players about their superstitious beliefs. The everyday superstitions selected for the questionnaire were chosen from a combination of those found in the research literature and others detected during pilot research. The superstitious beliefs regarding bingo were chosen through observing and listening to comments by bingo players during pilot research, prior to the study.

Independent variables: In addition to gender, a number of other independent variables were also investigated. These included the age of the player, whether they believed in astrology, the frequency of play, the average session spend, and whether they played fruit machines.

Age – Those who were 45 years and under were defined as “younger” players (53% of the sample), and those aged 46 years and over were defined as “older” players (47% of the sample).

Session spend – Those who reported regularly spending £20 or more in one bingo hall visit were defined as “heavy spenders” (29% of the sample), and those spending less than £20 per bingo hall visit as “light spenders” (71% of the sample).

Frequency of play – Those who reported playing bingo three or more times a week were defined as “heavy players” (20% of the sample), and those playing twice a week or less were defined as “light players” (80% of the sample).

Belief in astrology – Those who “always or almost always” read their horoscope were defined as “astrological believers” (25% of the sample), whereas those who “occasionally, very occasionally or never” read their horoscope were defined as “non-astrological believers” (75% of the sample).

Procedure: The study took place over four different evenings at one of the main bingo clubs in Nottingham (U.K.). Evening sessions were chosen in preference

over afternoon sessions as pilot research had shown that a greater variety of players attend bingo in the evenings (i.e., full-time workers, male clientele, etc.). All questionnaires were handed out early in the evening to give players time to complete the questionnaires before the end of the session. All participants were assured of anonymity and confidentiality. Completed questionnaires were collected during the intervals of the main games and participants were thanked for their help. Permission to carry out the study was given by both local management and the national head office.

Results

Superstitious beliefs: General findings

Players were also asked about the nature of bingo, and to choose whether bingo was a game of skill, luck, or chance. No one in the sample considered bingo to be a game of skill. The majority (73%) thought that bingo was a game of luck and the remaining 27% thought it was mostly a game of chance (participants were not given definitions of what luck or chance were, but made their own judgements). It was found that 81% of bingo players had at least one superstitious belief. Such beliefs included not opening an umbrella indoors (49%), not walking under ladders (55%), not putting new shoes on a table (60%), touching wood (50%), and not passing someone else on the stairs (40%). However, only 10% of the sample were superstitious while playing bingo (with a further 13% claiming they were “sometimes” superstitious while playing). This was reflected in such behaviours and beliefs as having a lucky night of the week (5%), having a lucky friend (4%), having a lucky mascot (6%), sitting in the same seat for luck (21%), believing certain numbers are lucky or unlucky (13%), and changing pens or “dobbbers” to change bad luck (29%) (see [Table 1](#)). Further to this, 27% of players believed in winning and losing streaks, 25% always or almost always read their horoscopes, and 57% believed in “fate” (i.e., that life is already mapped out for them).

Gender and superstitious beliefs

Superstitious beliefs were strongly associated with gender. Only 15.5% women reported having no superstitious beliefs, as opposed to 39% of the men ($X^2 = 16.585$, $p < 0.01$). Women were significantly more likely to not put new shoes on a table, not walk under ladders, not put up an umbrella in the home, not pass someone on the stairs, and touch wood (see [Table 1](#)). A smaller percentage of women (11%) than men (32%) reported never reading their horoscope ($X^2 = 17.335$, $p < 0.001$). More women (62%) than men (47%) expressed a belief in fate, but this was not found to be significant at the 1% level ($X^2 = 4.404$, $p < 0.036$). With regards to specific superstitious beliefs concerning bingo, there were no gender differences except that more women (32%) than men (15%) changed pens or

dobbers to change runs of bad luck ($X^2 = 6.733$, $p < 0.009$).

Age and superstitious beliefs

A greater percentage of the older age group (80%) than the younger age group (67%) believed bingo to be “a game of luck” ($X^2 = 7.984$, $p < 0.005$). Superstitious beliefs were also associated with age. In general, young bingo players were more superstitious, although older bingo players were more likely to believe in both astrology (31% old, 21% young; $X^2 = 12.19$, $p < 0.02$) and fate (67% old, 52% young; $X^2 = 8.64$, $p = 0.003$). More specifically, younger bingo players were more likely not to walk under ladders (63% young, 49% old; $X^2 = 7.56$, $p = 0.006$), believe the number “13” was unlucky (42% young, 33% old; $X^2 = 3.47$, $p = 0.062$) and generally be superstitious while playing bingo (30% young, 20% old; $X^2 = 5.23$, $p = 0.073$) than older bingo players.

Astrological beliefs and superstitious beliefs

Superstitious beliefs were also associated with astrological beliefs. In general, those who were astrological believers (ABs) were more likely to be superstitious than non-astrological believers (NABs). For instance, ABs were more likely not to put new shoes on a table, not to walk under ladders, not to cross on the stairs, to touch wood, and to be more generally superstitious while playing bingo (see [Table 2](#)). With regards to their bingo playing, ABs were more likely to have a lucky friend, to believe in lucky numbers, to change pens/dobbers to change runs of bad luck, and to be generally superstitious while playing bingo (see [Table 2](#)).

Heavy playing/spending and superstitious beliefs

When compared with light bingo players, heavy bingo players were more likely to believe in fate, be more superstitious while playing bingo, be more likely to have a lucky friend, be more likely to have a lucky seat, and be more likely to believe that some numbers are lucky/unlucky, although none of these were significant at the 1% level (see [Table 3](#)). When compared with light spenders, heavy-spending bingo players were significantly more likely to be superstitious, believe that the number 13 is unlucky, have a lucky friend, sit in the same seat for luck, and believe in astrology (see [Table 4](#) for full details).

Discussion

With regard to beliefs in luck and superstition, 27% thought bingo was a game of chance while 73% considered bingo to be a game of luck. This possibly supports the notion that, if gamblers see chance as unpredictable ([Wagenaar, 1988](#)) but regard luck as controllable ([Weiner, 1986](#)), then viewing bingo as a game of luck

could give players an illusion of control ([Langer, 1983](#)). Results also showed that a greater percentage of women than men reported a belief in everyday superstitions, and that women were also more likely to report reading their horoscope, which could imply that women are more superstitious than men. However, only one significant result was found regarding superstitious beliefs when playing bingo, with a greater percentage of women than men agreeing that they use different coloured pens to change bad luck.

The percentage of players reporting superstitious beliefs when playing bingo was much less, for both sexes, than the percentage reporting everyday superstitions. This possibly seemed surprising after the initial findings that the majority of players considered bingo to be a game of luck and the high percentage holding everyday superstitions. However, it may simply mean that, contrary to previous opinion ([Langer, 1983](#); [Darke & Freedman, 1997](#)), many do not try to control that luck, or at least not by means of superstitious belief. [Langer \(1983\)](#) also considered that people can have an illusion of control if they are familiar with the situation. However, it may have been the case that players did not consider that going on the same night with the same friends, or sitting in the same seat, were associated with luck, but merely part of a “familiar” social routine.

The fact that a higher percentage of players reported having the superstitious belief concerning the “different pens” possibly implies that the other beliefs chosen were not an ideal representative sample. However, very few participants offered alternative suggestions when asked on the questionnaire to give examples of “other” superstitious beliefs. [King \(1990\)](#) suggested that players' use of superstitious strategies in order to win implies skill, and thus some degree of control over the outcome of the game. However, in this case players did not report using these superstitious strategies. This could imply that it is more “instant” beliefs that players have, rather than anything “concrete” or “pre-planned.” They may not often consider whether they are superstitious or not, and the demand characteristics (the fact that they were asked) may have actually affected how they replied.

With regard to the superstitious beliefs of younger and older players, there were three significant results. The first was that a greater percentage of the younger players did not walk under ladders. The other two findings were that a greater percentage of the older rather than the younger players believed in fate, and considered bingo to be a game of luck. Whether superstitious belief regarding fate and luck increases with age, or whether it is something which is becoming less common within the younger generation in society, cannot, however, be answered without the benefit of a longitudinal study and/or further research.

There were significant results, perhaps not surprisingly, regarding the relationship between players' reported beliefs in astrology and in superstition. A higher

proportion of the players who usually or always read their horoscope were likely to subscribe to superstitious beliefs, even when the difference between readers and non-readers regarding a particular belief did not achieve statistical significance. However, there were again fewer significant findings with regards to superstitious beliefs particular to bingo. One of the two significant results was that a greater percentage of players reported using different coloured pens to change bad luck, if they read their horoscope “always/almost always.” The other was that a greater percentage of players who read their horoscope less frequently reported having no superstitious beliefs when playing bingo. This and the other findings imply that those who read their horoscope more often have a greater tendency towards holding other superstitious beliefs.

Although [Campbell \(1996\)](#) suggests that people do not really believe in such superstition, in this study, players reported many superstitious behaviours, such as reading their horoscope, touching wood, avoiding walking under ladders, changing the colour of pen while playing bingo, etc. It does appear that they were adopting an illusion of control over the chance elements in their lives ([Langer, 1983](#)). However, if players have a reason to play and if they believe they may win because of that reason, then it could be argued that having these beliefs could add more fun and excitement to the game. (For example, “It's my lucky night,” “I'm on a winning streak,” “I'm in my lucky seat,” or “My stars said I'd win.”)

There were no significant findings regarding how much money players spent during one session of bingo and any everyday superstitious beliefs, or with the frequency of reading their horoscope. Only one significant result regarding superstitious beliefs when playing bingo was found: that a greater percentage of heavy spenders stated that they always sat in the same seat for luck. Although not significant, 35% of heavy spenders, as opposed to 18% of light spenders, reported that they were, at least sometimes, superstitious when playing bingo. It was also found that a lesser percentage of the heavy spenders stated they had superstitious beliefs when playing bingo.

It is clear that a large percentage of players reported beliefs in luck and superstition. However, findings were varied, with a far greater percentage of players reporting everyday superstitious beliefs than beliefs concerned with bingo. Whether or not players believed they had control over luck cannot be conclusively stated; having superstitious beliefs is perhaps simply part of the thrill. Alternative studies could be conducted from any standpoint—players that spend most, players that attend most frequently, younger players, male players, those who have strong superstitious beliefs, etc. However, one future study which should be considered is an investigation of the “think aloud” method ([Griffiths, 1994](#)), to discover if bingo players have biased perceptions during play, and if there is a difference between what they say and what they actually do, in what is supposedly a game of chance.

References

- Brown, R.L.. (1970). *A book of superstitions*. Newton Abbot, Devon, U.K.: David & Charles.
- Campbell, C.. (1996). Half-belief and the paradox of ritual instrumental activism: A theory of modern superstition. *British Journal of Sociology*, 47 (1), 151-166.
- Darke, P. R.. Freedman, J. L.. (1997). Lucky events and beliefs in luck: Paradoxical effects on confidence and risk-taking. *Personality & Social Psychology Bulletin*, 23, 378-388.
- Dixey, R. A.. (1987). It's a great feeling when you win: Women and bingo. *Leisure Studies*, 6, 199–214.
- Jahoda, G.. (1971). *The psychology of superstition*. Middlesex, U.K.: Penguin Books.
- King, K. M.. (1990). Neutralizing marginally deviant behavior: Bingo players and superstition. *Journal of Gambling Studies*, 6, 43-61.
- Langer, E. J.. (1983). *The psychology of control*. London: Sage.
- Marmor, J.. (1956). Some observations on superstitions in contemporary life. *American Journal of Orthopsychiatry*, 26, 119-130.
- Skinner, B. F.. (1948). "Superstition" in the pigeon. *Journal of Experimental Psychology*, 38, 168-172.
- Thalbourne, M. A.. (1997). Paranormal belief and superstition: How large is the association? *Journal of the American Society for Psychical Research*, 91, 221-226.
- Vyse, S. A.. (1997). *Believing in magic: The psychology of superstition*. New York: Oxford University Press.
- Wagenaar, W. A.. (1988). *Paradoxes of gambling behaviour*. London: Erlbaum.
- Weiner, B.. (1986). *An attributional theory of motivation and emotion*. New York: Springer-Verlag.

Tables

Table 1

Gender differences in general and specific superstitious beliefs

General Belief	%F	%M	%Tot	χ^2	p
Not putting new shoes on a table	64%	36%	60%	15.14	0.0002*
Not walking under ladders	59%	42%	55%	5.55	0.018
Not putting an umbrella up in the house	52%	28%	49%	10.24	0.001*
Not passing someone on the stairs	45%	19%	40%	13.00	0.001*
Touching wood	54%	30%	50%	10.63	0.001*
Not leaving a house by a different door	9%	15%	14%	1.22	0.270
That the number "13" is unlucky	39%	36%	38%	0.18	0.668
Believe in fate	62%	47%	57%	4.40	0.030
Reading horoscope (at all)	89%	68%	86%	19.20	0.001*
Specific belief (bingo-related)	%F	%M	%Tot	χ^2	p
Superstitious while playing bingo	13%	4%	10%	4.43	0.094
Having a lucky night of the week	4%	6%	5%	0.23	0.630
Having a lucky mascot	5%	9%	6%	1.16	0.218
Sitting in the same seat for luck	23%	20%	21%	0.16	0.694
Believing certain numbers are lucky or unlucky	15%	9%	13%	1.32	0.25
Changing pens or dobbers to change runs of bad luck	32%	15%	29%	6.73	0.009*

Table 2

Differences in general and specific superstitious beliefs among astrological and non-astrological believers

General belief	%AB	%NAB	%Tot	X ²	p
Not putting new shoes on a table	73%	55%	60%	9.25	0.02
Not walking under ladders	69%	52%	55%	8.16	0.04
Not putting an umbrella up in the house	54%	47%	49%	1.42	0.234
Not passing someone on the stairs	50%	38%	40%	4.38	0.036
Touching wood	59%	47%	50%	4.21	0.04
Not leaving a house by a different door	16%	13%	14%	0.36	0.548
That the number 13 is unlucky	43%	35%	38%	2.14	0.14
Believe in fate	71%	53%	57%	10.27	0.001*
Specific belief (bingo-related)					
Specific belief (bingo-related)	%AB	%NAB	%Tot	X ²	p
Superstitious while playing bingo	20%	8%	10%	9.92	0.007
Having a lucky night of the week	7%	4%	5%	1.63	0.202
Having a lucky friend	6%	2%	4%	3.39	0.066
Having a lucky mascot	6%	5%	6%	0.09	0.76
Sitting in the same seat for luck	24%	21%	21%	0.46	0.497
Believing certain numbers are lucky or unlucky	19%	12%	13%	3.28	0.07
Changing pens or dobbers to change runs of bad luck	46%	24%	29%	17.13	0.0001*

Table 3

Differences in general and specific superstitious beliefs among heavy and light players

General belief	%HP	%LP	%Tot	X ²	p
Not putting new shoes on a table	60%	59%	60%	0.02	0.89
Not walking under ladders	58%	55%	55%	0.39	0.53
Not putting an umbrella up in the house	49%	48%	49%	0.07	0.79
Not passing someone on the stairs	43%	40%	40%	0.18	0.67
Touching wood	52%	49%	50%	0.25	0.61
Not leaving a house by a different door	18%	13%	14%	1.34	0.25
That the number 13 is unlucky	41%	37%	38%	0.42	0.52
Reading horoscope (at all)	83%	87%	86%	3.19	0.53
Believe in fate	71%	55%	57%	6.37	0.012
Specific belief (bingo-related)					
Specific belief (bingo-related)	%HP	%LP	%Tot	X ²	p
Superstitious while playing bingo	19%	9%	10%	5.87	0.053
Having a lucky night of the week	7%	4%	5%	0.83	0.363
Having a lucky friend	7%	2%	4%	3.09	0.079
Having a lucky mascot	9%	5%	6%	2.26	0.133
Sitting in the same seat for luck	30%	19%	21%	4.25	0.039
Believing certain numbers are lucky or unlucky	20%	12%	13%	3.35	0.067
Changing pens or dobbers to change runs of bad luck	37%	27%	29%	2.84	0.092

Table 4

Significant differences between heavy- and light-spending bingo players

Variable	%HS	%LS	%Tot	X ²	p
Be superstitious	36%	18%	19%	14.05	0.001
That the number 13 is unlucky	45%	35%	38%	3.17	0.075
Having a lucky friend	7%	2%	4%	5.87	0.015
Sitting in the same seat for luck	32%	17%	21%	10.9	0.001
Believe in astrology	19%	28%	25%	3.43	0.064

Keywords:

Keywords

gambling, bingo

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superstitious beliefs

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luck

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