

# FORMULA FOR THE PERFECT PINT



MINDLAB INTERNATIONAL / WPR

## INTRODUCTION TO METHODOLOGY

Mathematicians at Mindlab have used complex mathematical modelling techniques to discover the ideal environment in which to drink a pint of beer. Research was commissioned by WPR on behalf of Taylor Walker and the survey was conducted by Yoursaypays. One thousand respondents across the UK were asked a series of questions on the ambient temperature, the ideal number of days until going back to work, the preferred number of people present, current mood, the volume of music being played and availability of food (see Appendix A). All of these factors contributed to the mathematical model to discover the perfect context in which to drink a refreshing pint.

## RESULTS

EQUATION:

$$E = -(0.62T^2 + 39.2W^2 + 62.4P^2) \\ + (21.8T + 184.4W + 395.4P + 94.5M - 90.25V) \\ + 50(S + F + 6.4)$$

Where:

$E$  is a factor describing overall enjoyment.

$T$  is the ambient temperature in degrees Celsius.

$W$  is the number of days until you are required back into work.

$P$  is the number of people with whom you are drinking.

$M$  is related to your mood whilst drinking the pint.

*V* is related to the volume of the music being played.

*S* and *F* are related to the availability of snacks and food.

**The maximum satisfaction is found to occur at an ambient temperature of 17.6 degrees Celsius, with just over two days until you are due back in work, between three and four people with you, all in good spirits, with quiet music and widely available food and snacks.**

## DESCRIPTIVE STATISTICS

See Appendix B for graphs showing the overall descriptive statistics.

### *Gender*

Men and women scored similarly on many of the survey questions, however some interesting differences emerged. Men prefer one-on-one drinking compared to women, with 22.9% of men preferring drinking with one other person compared to only 16.6% of women. More men prefer to be inside the pub compared to women, with 31.0% choosing inside the pub as their favourite spot compared to only 18.4% of women. Women like to be at the pub too, but prefer to be outside (48.3% of women stated the pub garden was their favourite location compared to 37.9% of men). Men also like to drink slightly faster than women.

Perhaps not surprisingly, more men prefer playing games while drinking compared to women, with 16.4% of men agreeing that playing games enhanced the taste of a pint compared to only 11.0% of women. Watching sport enhances the taste of a pint for 25% of men compared to only 13.1% of women, with 25% of women feeling that it actually spoils the taste of their pint.

## Age

A cheeky lunchtime pint is most popular with the 35-44 age group (10.7% preferred) and least popular with the 18-24 age group (2.4% preferred). The 18-24 year olds enjoy a Sunday pint (29.4% preferred). Older people prefer bit longer to recover, with 24.4% of 55-64 year olds and 26.7% of the 65+ year group choosing 3 or more days before going back to work. Drowning one's sorrows seems to get less appealing with age; with 0% of the over 65 age group but 5.9% of 18-24 year olds choosing a bad mood as their favourite mood state to enjoy a pint.

Loud music was rated less highly as a function of age; with 16.5% of 18-24 year olds but only 6.3% of the 65+ group saying it enhanced their pint experience. In fact, 68.6% of the 65+ age group said that it would actually spoil their pint experience compared to only 17.4% of 18-24 year olds stating the same. Similarly, liking having people everywhere is also dependent on age, with 14.1% of 18-24 year olds but only 5.8% of the 65+ group stating having people everywhere improved the taste of their pint; and 4.7% of 18-24 year olds but a huge 23.3% of the 65+ group saying having people everywhere actually detracted from the taste of their pint.

## Region

The Scots are the hardest drinkers when it comes to ambient temperature; with 12.1% of Scottish drinkers choosing below 0° Celsius as their favourite temperature to drink a pint in, compared to only 2.5% of people from Central England. Good thing it rains a lot in Ireland; with 9.1% of Irish drinkers choosing rain as their favourite weather for drinking a pint. No other region scored above 1.1% for preferring a pint in the rain. Central England is the place to enjoy a pint at lunchtime, with 13.5% favouring lunchtime on a workday as their favourite time. In contrast, no Northern Irish respondents chose lunchtime as their favourite time to drink.

A pattern emerged in which Wales, Ireland and Northern Ireland are in contrast. The Irish prefer to drink with only one other person (31.8%), only 4.5% like loud music when they drink, and a very low 9.1% said their favourite state to be in to enjoy a pint was extremely happy. Similarly, Northern Irish like to drown their sorrows more than other regions, with 6.3% choosing a bad mood as their favourite state to drink a pint. In contrast, Welsh respondents scored the lowest on one-to-one drinking (7.3%), preferring group drinking in an extremely happy mood (a huge 48.8%, with 0% preferring a bad mood). Those from Wales were also

more tolerant of loud music, with 17.1% of Welsh respondents saying that it actually enhanced the taste of their pint. This suggests that Ireland and Northern Ireland have a different way of enjoying drinking a pint compared to the Welsh, with Irishmen quietly drowning their sorrows and Welshmen having a happier, more raucous time.

Respondents from the South West were the slowest drinkers, with 10.4% taking 30 minutes or more to drink a pint. They lag behind their neighbours in the South East, the fastest drinkers, with only 3.4% taking longer than half an hour to drink a pint and 4.5% (the highest of any region) enjoying drinking a pint in less than 5 minutes.

### **Socioeconomic**

Clear differences emerged between the highest and lowest socioeconomic groups. The letters A to E represent different working classes:

- A: Higher managerial / administrative / professional*
- B: Intermediate managerial / administrative / professional*
- C1: Supervisory / clerical / junior managerial*
- C2: Skilled manual workers*
- D: Semi-skilled and unskilled manual workers*
- E: Casual Labourers / pensioners / unemployed*

Category E are the toughest drinkers when it comes to ambient temperature, with 9.8% enjoying a pint the most in <math><0^{\circ}</math> Celsius weather compared to only 1.5% of Category A choosing <math><0^{\circ}</math> as their preferred temperature to drink a pint. More Category A workers prefer one-on-one drinking (32.3%) than any other group. Interestingly, Category A workers were the most likely to enjoy drowning their sorrows, with 6.2% choosing a bad mood as their favourite state to drink in, compared to only 0.8% of Category E workers. Skilled manual workers (C2) were the fastest drinkers, with 5.1% preferring to down their pint in less than 5 minutes. In contrast only 1.5% of Category A workers like to drink that quickly. Similarly, Category A workers are more likely to take more than 30 minutes to drink a pint (9.2%) compared to 3.3% of Category E workers.

## APPENDICES

### APPENDIX A – SURVEY QUESTIONS

#### Factors contributing to the perfect pint:

**Q1 At what temperature in degrees centigrade should the perfect pint be drank? (Air temperature not pint temperature)**

<0 (Apres Ski?)

0-9

10-19

20-25

25-29

>30 (Tropical)

**Q2 What should the weather be when drinking the perfect pint?**

Warm and sunny

Cold and sunny

Overcast & cloudy

Raining

Freezing

Not important

**Q3 For the best pint experience, how may days should there be until you need to back to work?**

0 (Cheeky lunchtime pint)

1 (Sunday drinking)

2 (Saturday)

3 (Friday after work)

>3 (Long weekend/holiday)

**Q4 How many people should you be with to best enjoy a pint?**

- 0 (I prefer drinking alone)
- 1 (Threes a crowd)
- 2-5 (Just the few of us)
- >5 (Part of a crowd)

**Q5 Which type of mood makes the pint taste better? Please rank between 1 and 5 with 1 being a very bad mood and 5 being wonderfully happy.**

- 1 Bad day - need a drink
- 2
- 3
- 4
- 5 The world is wonderful - enjoy a drink

**Q6 On a scale of 0 - 5 how much would the following improve/decrease your enjoyment of you pint? (0= It would spoil my pint, 3=make no difference, 5=It would make it taste much better)**

Games (Darts, Pool, Cards etc.)

Sport on the telly

Nice music in the background

Loud music belting out.

Good food is available

Quality snacks are available

There are people everywhere

**Q7 Beer tastes better when I am....**

Inside a pub

Pub garden

At home indoors

At home in the garden

At a restaurant

Somewhere else

**Q8 What is the perfect amount of time to savour a pint?**

Less than 5 minutes

Between 5 and 10 minutes

Between 10 and 20 minutes

About half an hour

Longer than half an hour.

APPENDIX B

GRAPHS SHOWING DESCRIPTIVE STATISTICS

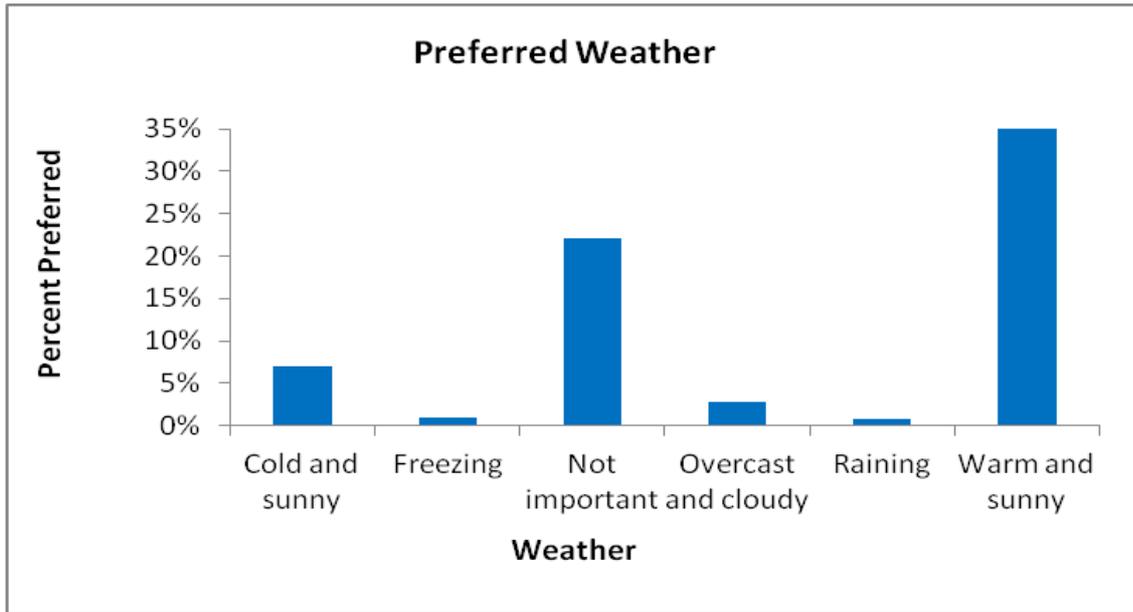


Figure 1 shows the preferred weather conditions for enjoying the perfect pint.

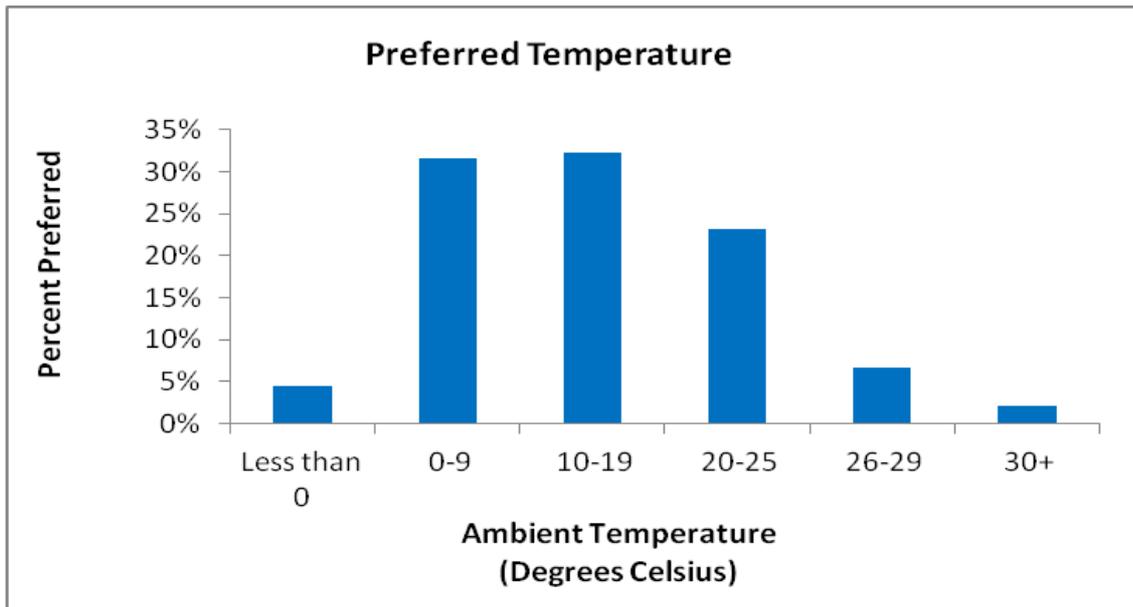


Figure 2 shows the preferred ambient temperature for enjoying the perfect pint.

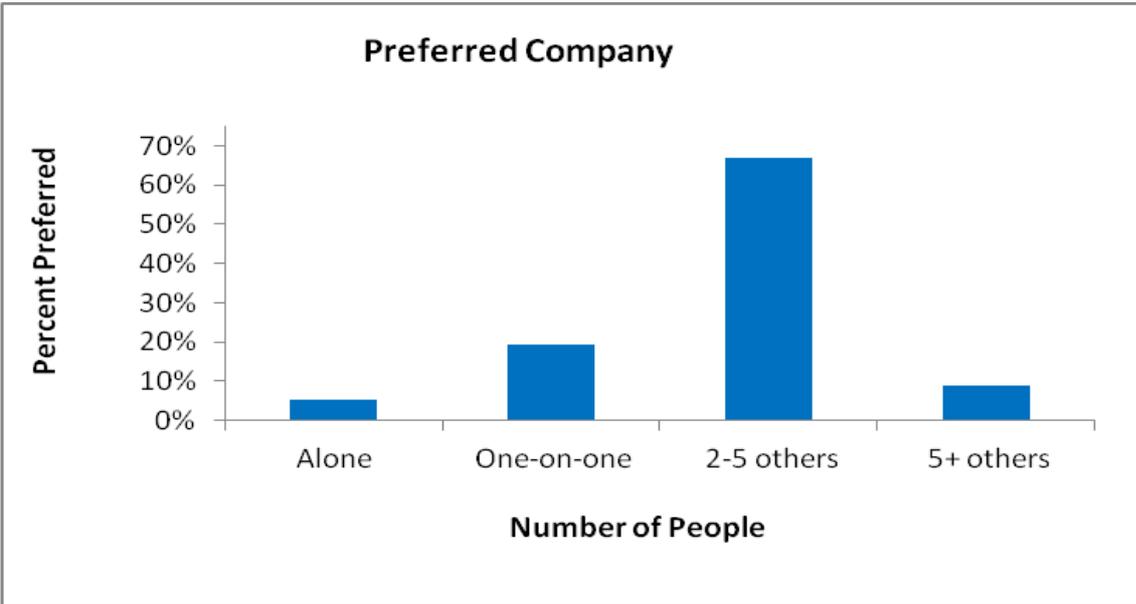


Figure 3 shows the preferred number of people present for enjoying the perfect pint.

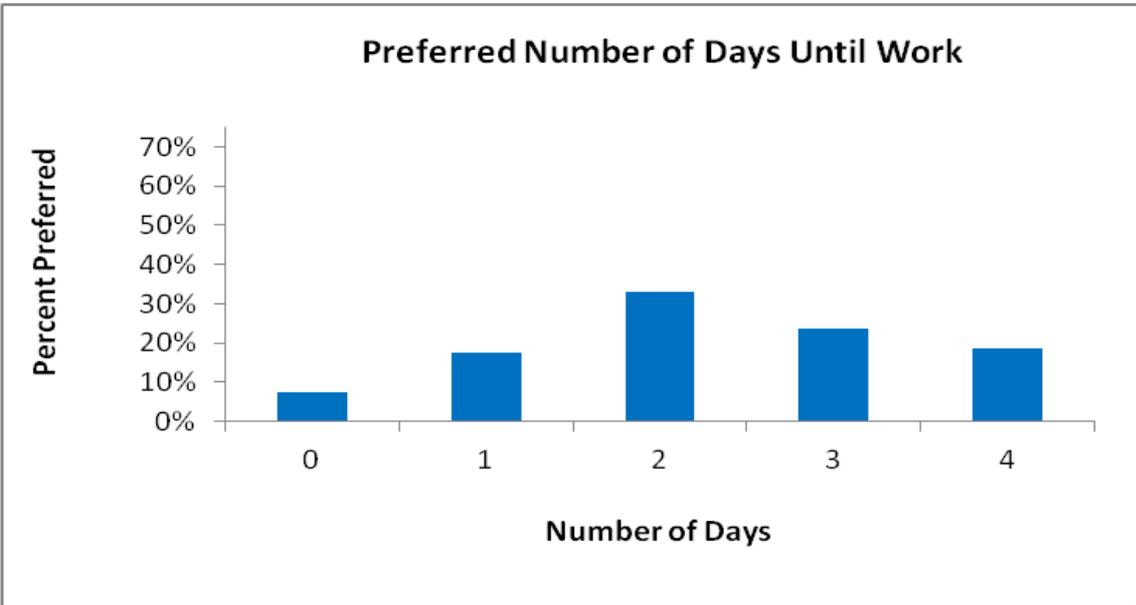


Figure 4 shows the preferred number of days before going back to work for enjoying the perfect pint. 0 was a cheeky lunchtime pint, 1 was Sunday, 2 was Saturday, and 3 was Friday and 4 was a long weekend.

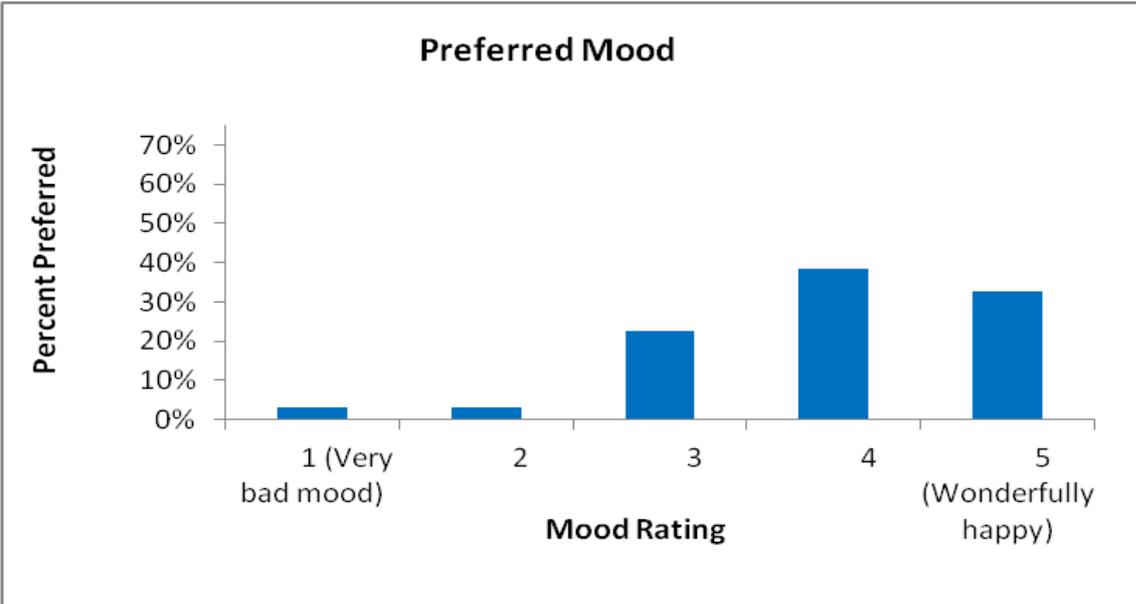


Figure 5 shows the preferred mood state for enjoying the perfect pint.

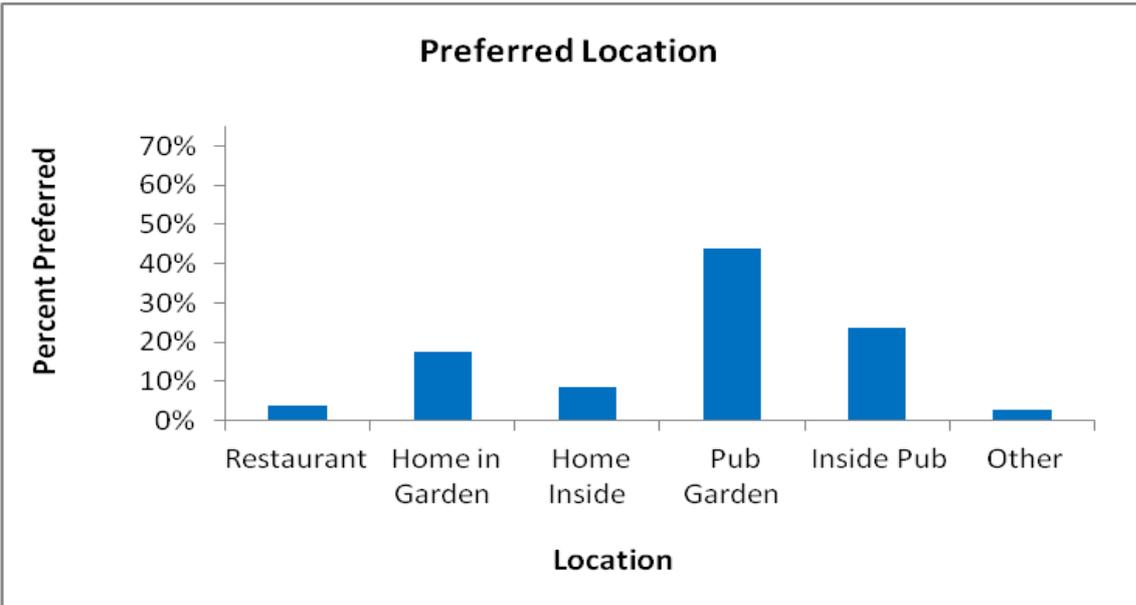


Figure 6 shows the preferred location for enjoying the perfect pint.

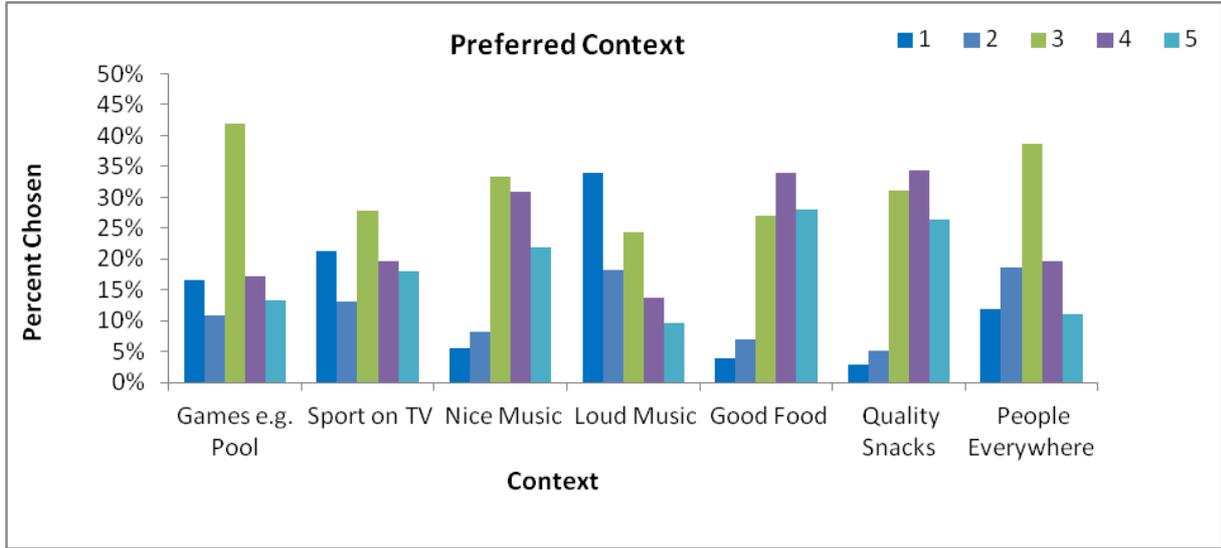


Figure 7 shows the preferred context for enjoying the perfect pint. The ratings are from 1 (would spoil the pint), 3 (indifference) through to 5 (would make the pint taste better).

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