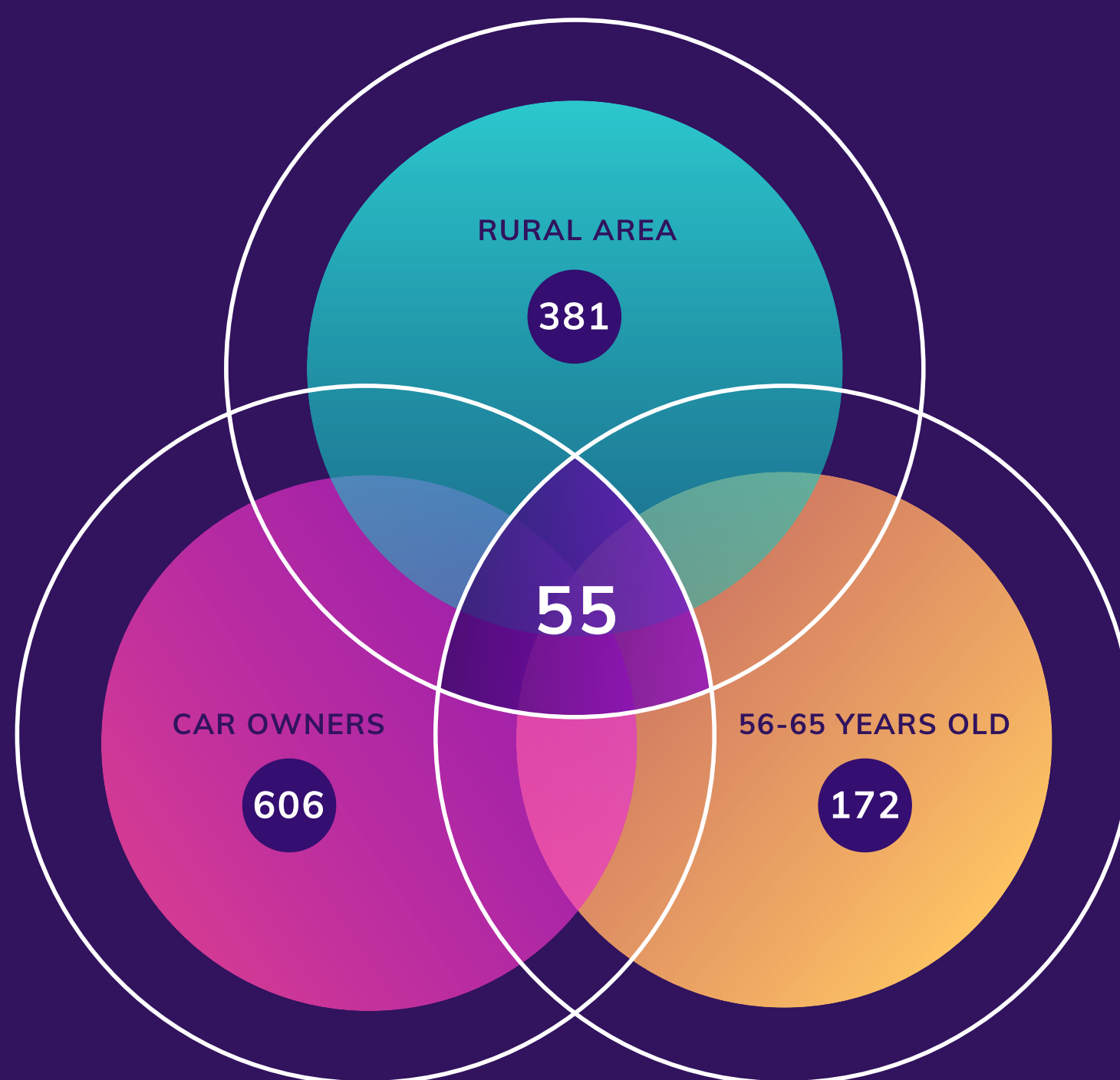


MRP: Uncovering Insights in Niche Audiences

Advanced brand tracking differentiates itself from other brand tracking solutions by enabling users to detect differences in brand KPIs for niche target audiences, even when the sample size is limited.



History

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Welcome

Hello,

Latana is the world's first advanced brand tracker fuelled by AI technology. We focus on pushing boundaries to bring a new level of quality brand tracking to the world. The precise data our brand tracker provides accurately shows companies the real-world impact brought by brand campaigns and enables them to make better marketing decisions.

Korbinian Kuusisto

Fred DeVeaux

www.latana.com

We also regularly share our thoughts on marketing and brands.

www.latana.com/articles

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Introduction

Brands are making big-budget marketing decisions based on guesswork rather than fact.

Brand is perception and that perception drives human behavior. If companies can understand human behavior, then they can predict consumer behavior.

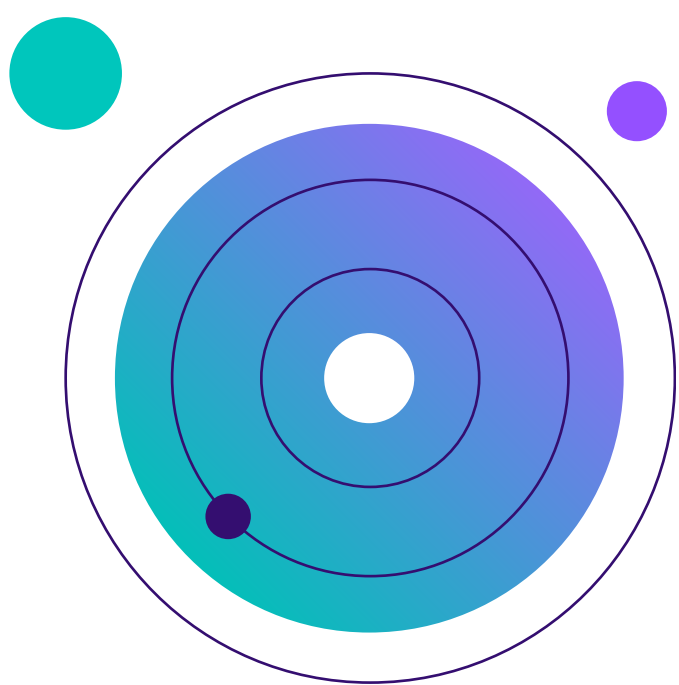
Thanks to the development of brand trackers, companies have been able to better understand consumers. To an extent. Traditional brand tracking options are limited when it comes to [audience segmentation](#) available to brands (age, gender, location). While tracking general brand perception for these limited demographics is still useful, the real value of brand tracking comes from the ability to uncover the perceptions of [niche audiences](#). Why? Because it is unlikely that any brand's audience is as simple as women or men who live in London. It is more likely the case that brands want to know which middle-aged men who read car magazines or expectant mothers in Berlin in their twenties think, as these audiences better fit their product.

But here's another big problem with more traditional brand tracking solutions: the more specific the niche audience is, the harder it is to track their brand perception. The reason is simple — niche audiences are small, and despite the growing accessibility of online surveys, it's still very difficult for brand trackers to find enough respondents to answer surveys for each of these niche audiences. The result is that most brand trackers will either 1) not deliver insights for niche audiences, 2) will spend a ton of time and money to get insights from a select few niche audiences (and charge millions), or 3) provide insights based on small sample sizes that have very large margins of error and, therefore, are practically meaningless.

MULTILEVEL REGRESSION AND POSTSTRATIFICATION

- So what's the solution? Niche audiences are important — we can't change that. Niche audiences are small as well — we can't change that either. So it's time to change how we generate the insights. This white paper presents a solution to a major challenge that brand tracking tools face when trying to measure brand perception in niche audiences: small sample sizes. It will show how brand tracking software using [Multilevel Regression and Poststratification \(MRP\)](#), a predictive model that has the ability to uncover insights in niche audiences even when sample sizes are small, is breaking past the limits of traditional survey research techniques to enable brands to track niche audiences with accuracy.

To illustrate the benefit of this component of MRP, this white paper includes a case study based on JustPark, a parking app. Using the data gathered by Latana for JustPark, it will show how MRP makes it possible to uncover differences in brand awareness for niche target audiences in cases where traditional brand tracking methods are limited by small sample sizes.



A Brief History of MRP



Thomas Bayes, 1702 - 1761
English mathematician, statistician,
philosopher and Presbyterian pastor.

Thomas Bayes was an English statistician and philosopher who formulated the Bayes' theorem upon which MRP is based. The theorem was first presented in the work "An Essay towards solving a Problem in the Doctrine of Chances", which was read to the Royal Society in 1763 after Bayes' death.

The Bayes' theorem determines the probability of an event. The main advantage is that it gives the full probability distribution i.e. better uncertainty estimates. Therefore, the theorem allows for a more accurate risk analysis than a simple assumption that is typical of the population as a whole.

ELECTION POLLING

- ▶ MRP was first used in the US to estimate US-state-level voter preference in 2009. However, the process gained popularity after it was used to estimate the outcome of the 2012 US presidential election based on a survey of Xbox users, where it was able to mitigate the problem of highly skewed data and provide good results despite some bad data being collected. MRP was also used to successfully predict the 2016 election victory of Donald Trump and the overall outcome of the 2017 UK general election.

While in the past research was a battle of finding a sample of people representative of the whole population, MRP records a lot of data about the respondents and uses it to create a model of how various groups of people are likely to vote. MRP enables you to make granular predictions by assuming that certain demographics in one segment have similar preferences to the same demographic in another segment, eliminating the need for large samples in every constituency.

MRP AND BRAND TRACKING

- ▶ In 2019, Latana became the first brand tracker to apply MRP (Multilevel Regression and Poststratification) to brand tracking. MRP is a machine learning algorithm that enables dynamic modeling, which means it can control more variables and maintain higher levels of accuracy for niche audiences.

As a result, Latana is the first company to devise a brand tracking solution that guarantees deeper insights and more reliable results than quota sampling. That means brand tracking software which:

- Produces lower margins of error
- Allows deep audience segmentation so brands can track even the most niche demographics
- Provides better quality insights that are more closely aligned to real-world changes

CASE STUDY

Uncovering Insights in Niche Audiences



Niche Audience

**Car Owners in the
Biggest Cities**

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Niche Audience

**Car Owners in
Smaller Cities**

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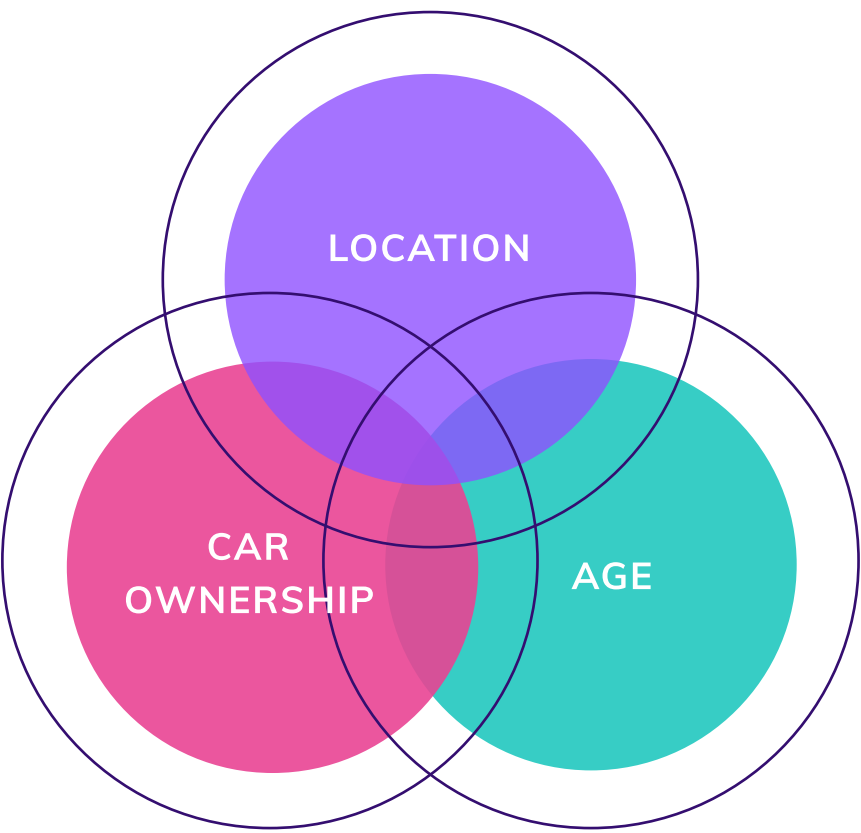
Niche Audience

**Car Owners in
Rural Areas**

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How Latana Enabled JustPark to Determine Whether or Not There Was a Difference in Brand Awareness Between Younger and Older People

Detailed insights would not have been viable for JustPark had they opted for traditional brand tracking methods as it's difficult to find respondents that fall into such specific niche audiences.



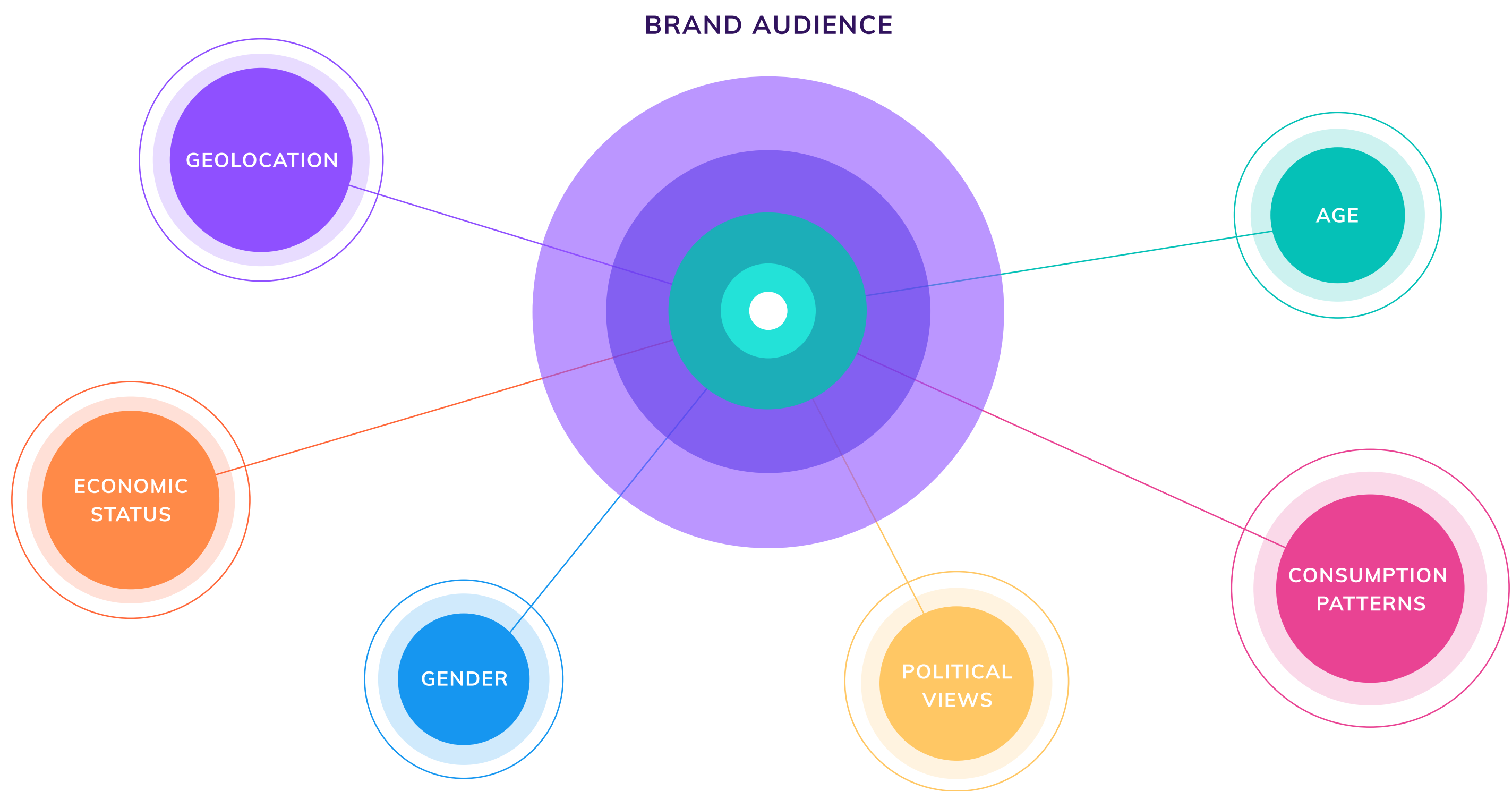
Latana worked with JustPark, a technological solution that matches drivers with parking spaces through its website and mobile application, to measure their level of brand awareness across the UK to understand what share of Britons have heard of their app. They also wanted to zoom into specific key target audiences and understand to what level different demographics have heard of their brand.

JustPark was specifically interested in car owners who live in either London, Manchester, or Birmingham to determine whether or not there was a difference in brand awareness between younger and older people. This information would be vital for them when creating brand campaigns that would target the right people.

Detailed insights would not have been viable for JustPark had they opted for traditional brand tracking methods as it's difficult to find respondents that fall into such specific niche audiences. Out of a nationally representative sample of 1,000 respondents (a typical size for a sample), only a handful will be car owners who also live in specific cities, the sample size made smaller again if age was thrown into the equation. Plus, the results would have been unreliable because the information would have been sparse.

One may ask why JustPark doesn't just find a larger number of respondents in their niche audience? There is a simple answer to this. Like most companies, JustPark doesn't have just one niche audience. In fact, there are dozens and dozens of different types of personas that they care about and would like to tailor their marketing towards. Therefore, the time and cost of trying to find enough respondents who belong to each of these niche audiences groups are way too inefficient.

We collected a nationally representative sample of 1000 respondents in June 2019 using MRP to measure the relationship between the outcome variable (brand awareness) and the three respondent characteristics (**car ownership, age, location**). We looked at each characteristic separately, thus using information from all 1000 respondents to quantify the relationship between each characteristic and brand awareness. We then used this model to calculate estimates for brand awareness for the niche audience - respondents who have all three of these characteristics.



RESULTS

- For both the MRP and the traditional brand tracking approach, the overall population estimate of brand awareness in the UK is 11%, meaning that around 11% of people in the UK are aware of the app called JustPark.

Note that the estimate for the overall population is similar for both approaches. This is because both the MRP model and traditional method use information from all 1000 respondents in this case.

However, JustPark’s main goal was to find out if age plays a role in brand awareness for car owners living in either London, Manchester, or Birmingham. In other words, if young people who drive cars and live in the selected cities are more or less aware of JustPark’s app than older people who drive cars and live in the selected cities.

For specific insights into niche audiences, this is where the difference between the two approaches becomes apparent. On the one hand, the traditional approach generates unreliable results that are based on a tiny sample of respondents in the niche audience. On the other hand, the MRP model still uses information from the entire sample to estimate brand awareness for the niche audience and therefore produces results that are much more precise and reliable. Thanks to this technique, the MRP model is able to uncover differences between old and young respondents in JustPark’s niche target audience.

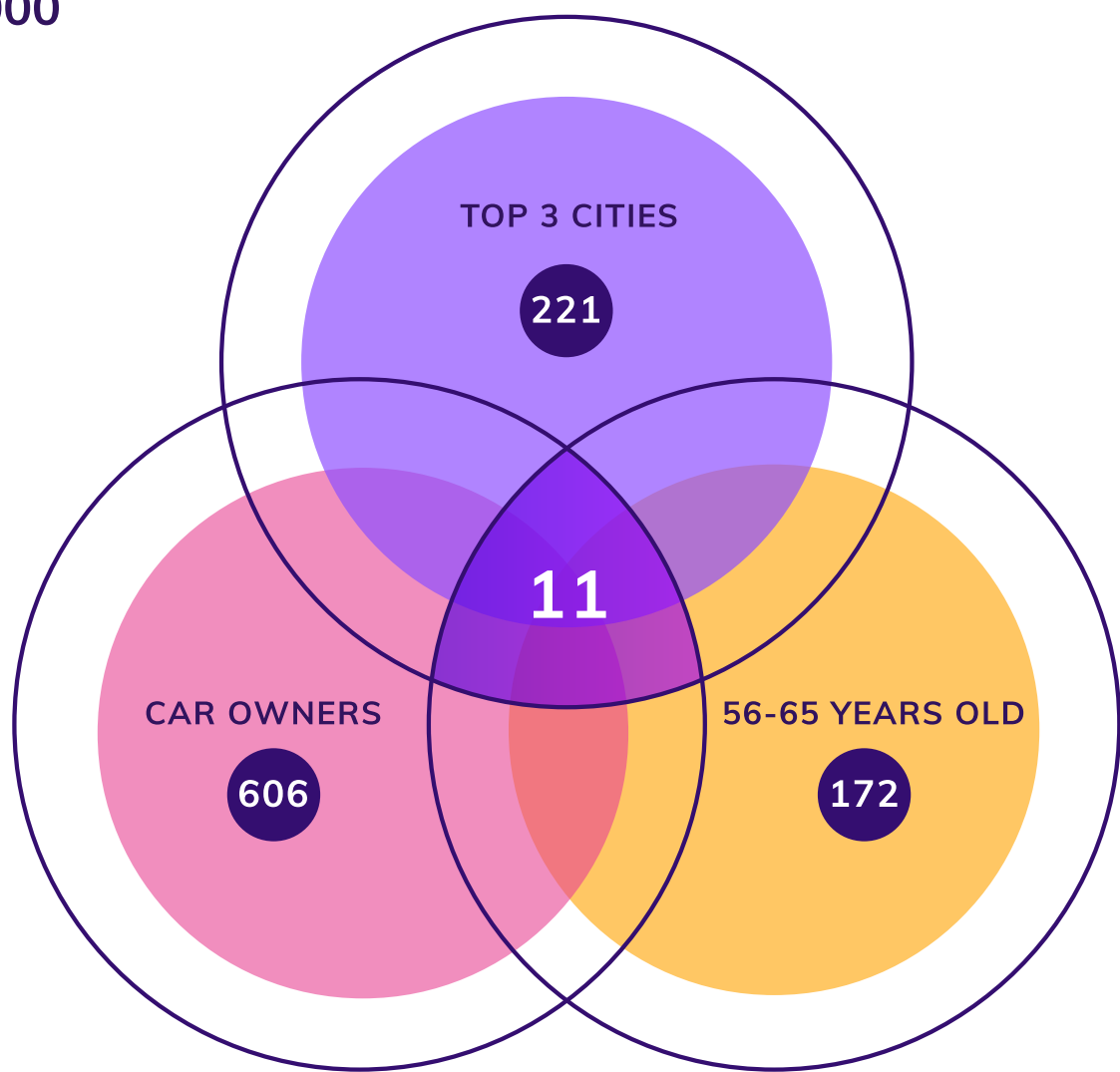
In the following pages are the results for several different examples of niche audiences.

Car Owners in the Biggest Cities

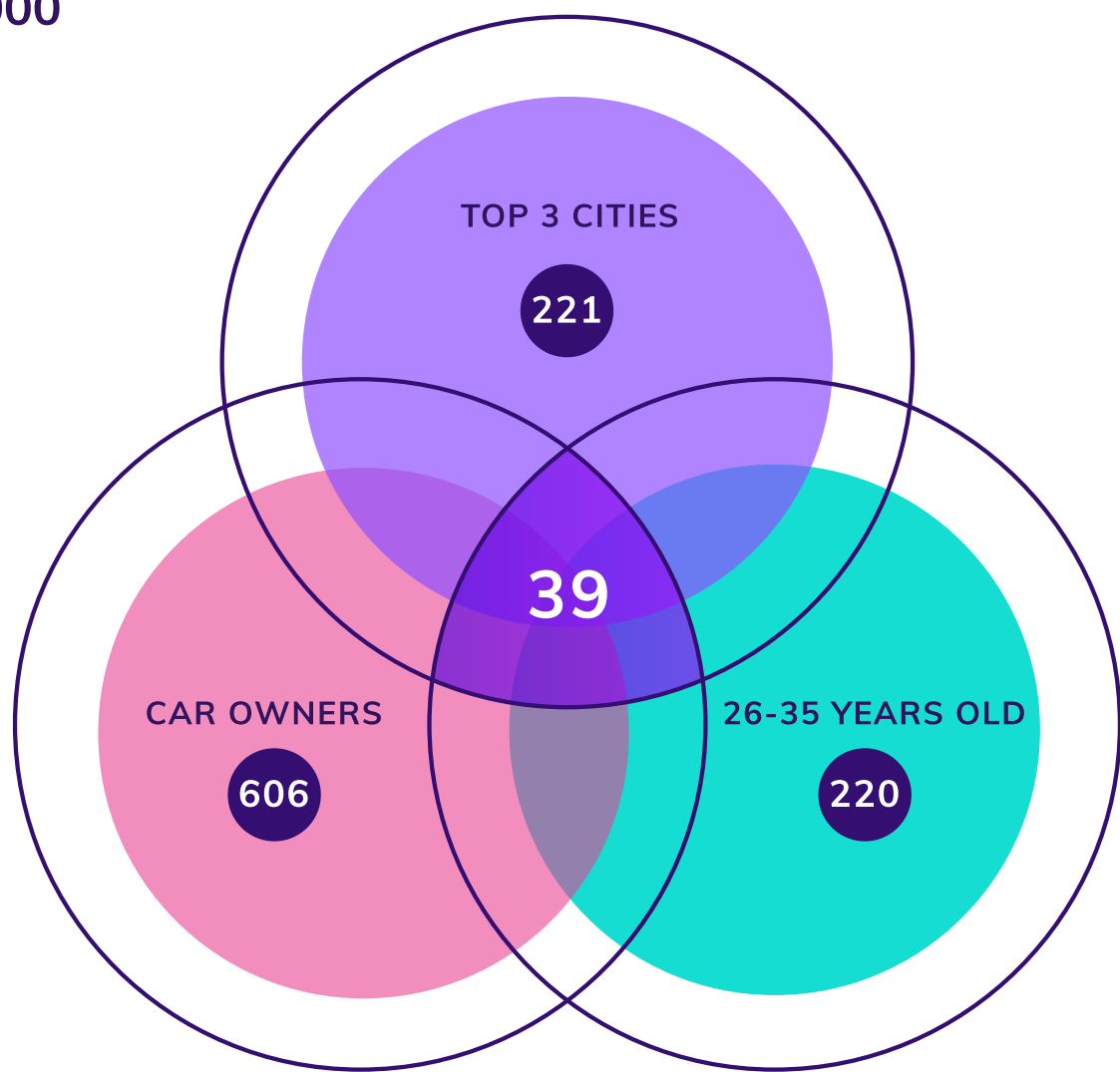
JustPark wanted to find out if there's a difference in brand awareness between young and older people within the following niche audience: car owners who live in the 3 biggest cities.

The sample sizes for these niche audiences are for older people n=11 and for younger people n=39:

OLDER PEOPLE
N = 1000

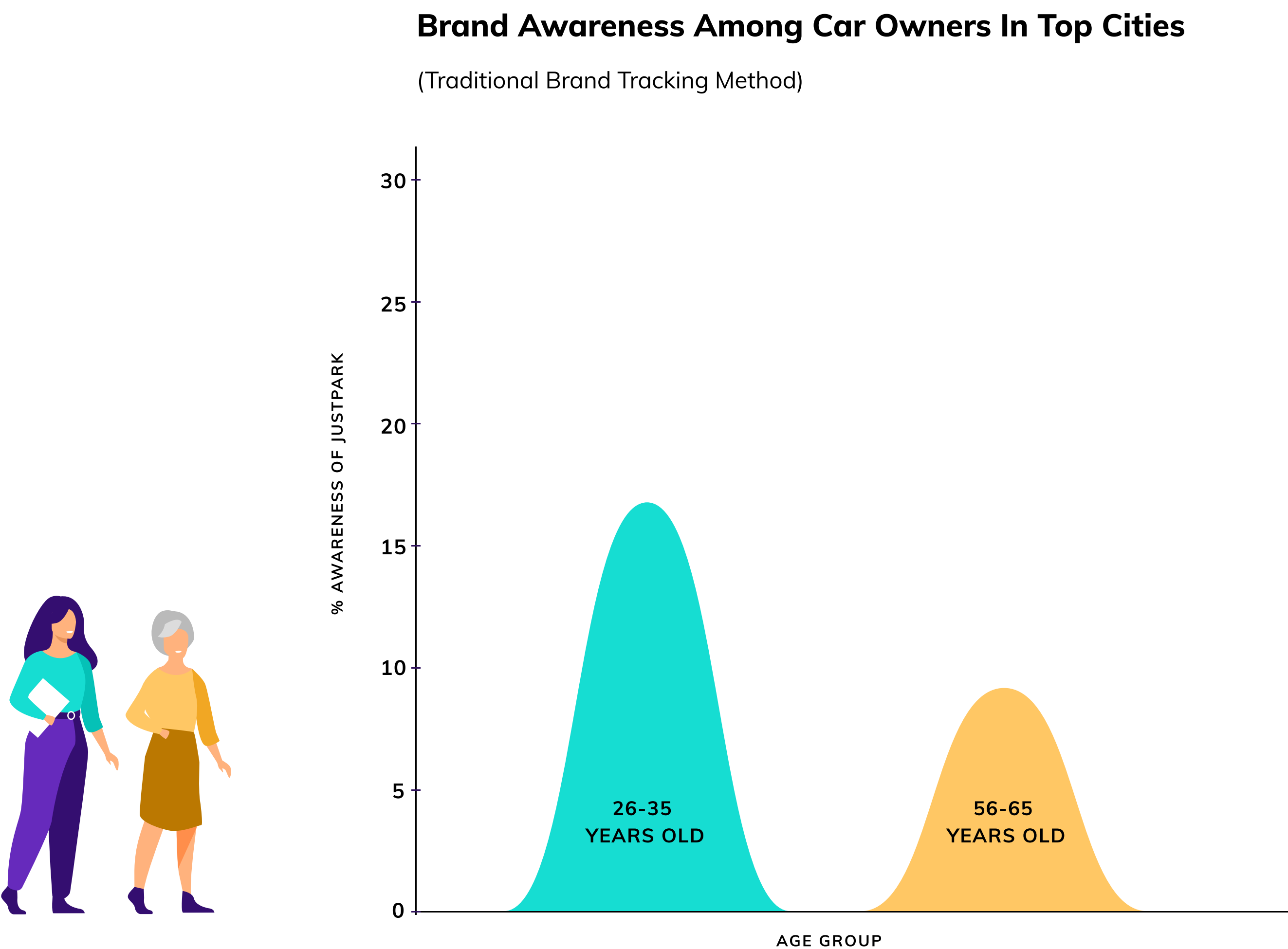


YOUNGER PEOPLE
N = 1000



Traditional Method

Here are the insights using the traditional brand tracking method:

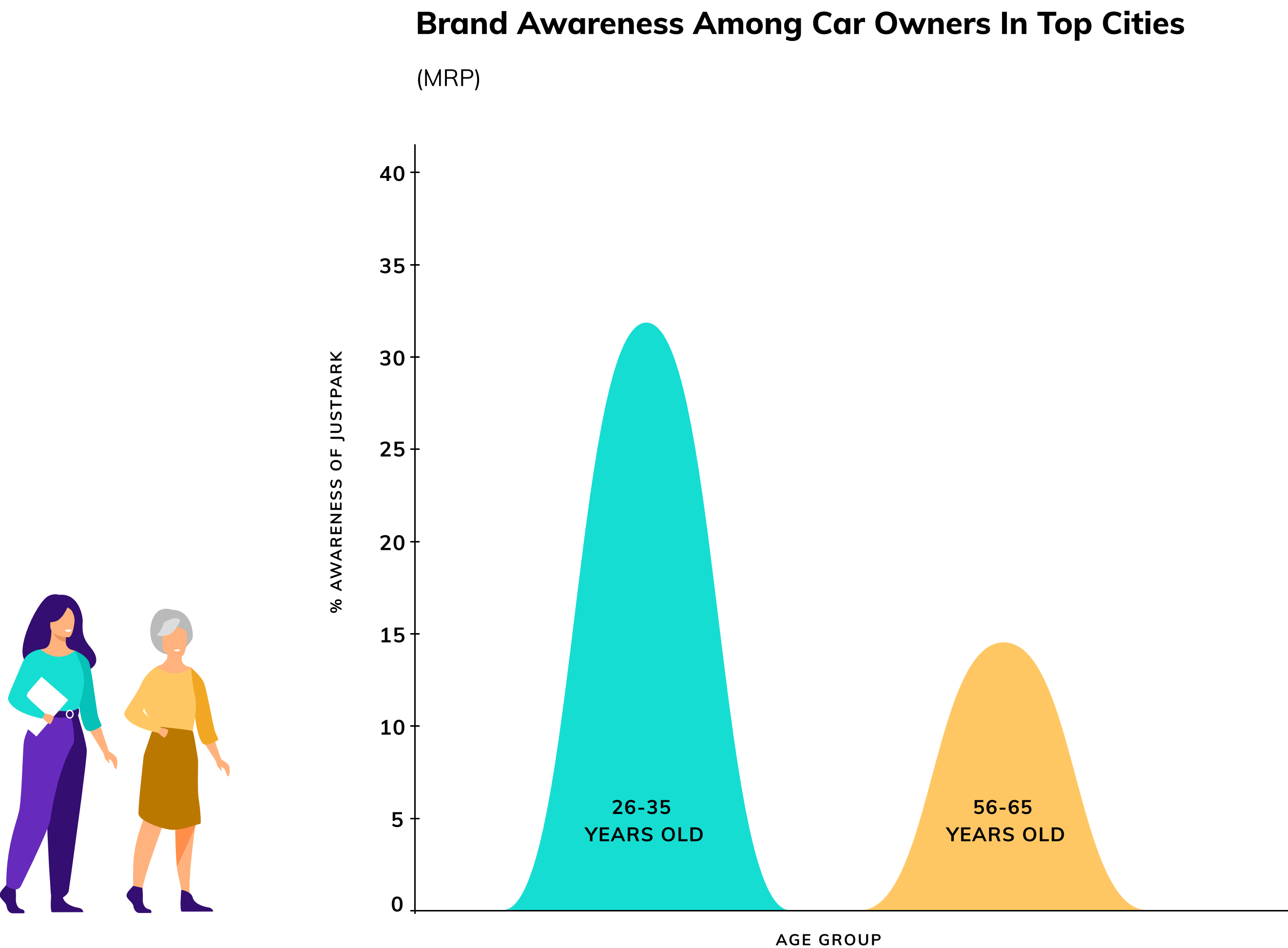


The sample sizes used to calculate the estimates are far too small for the results to generate meaningful insights. From this approach, JustPark cannot conclude that there’s a difference in brand awareness between young and older people within the niche audience (the confidence intervals are so large that brand awareness can be anywhere between 5-30% and 0-25%).

In other words, trying to measure brand awareness for niche audiences with such small sample sizes results in meaningless insights.

MRP

For comparison, here are the insights from the MRP model:



Thanks to MRP, JustPark can confidently say that brand awareness among young car owners is significantly higher than among older respondents living in big cities.

Now it's clear that there is a difference between younger and older respondents in JustPark's target audience. Thanks to MRP, JustPark can confidently say that brand awareness among young car owners who live in the top 3 cities in the UK is around 34%, and this is significantly higher than the 15% awareness among older respondents who drive cars and live in the top 3 cities.

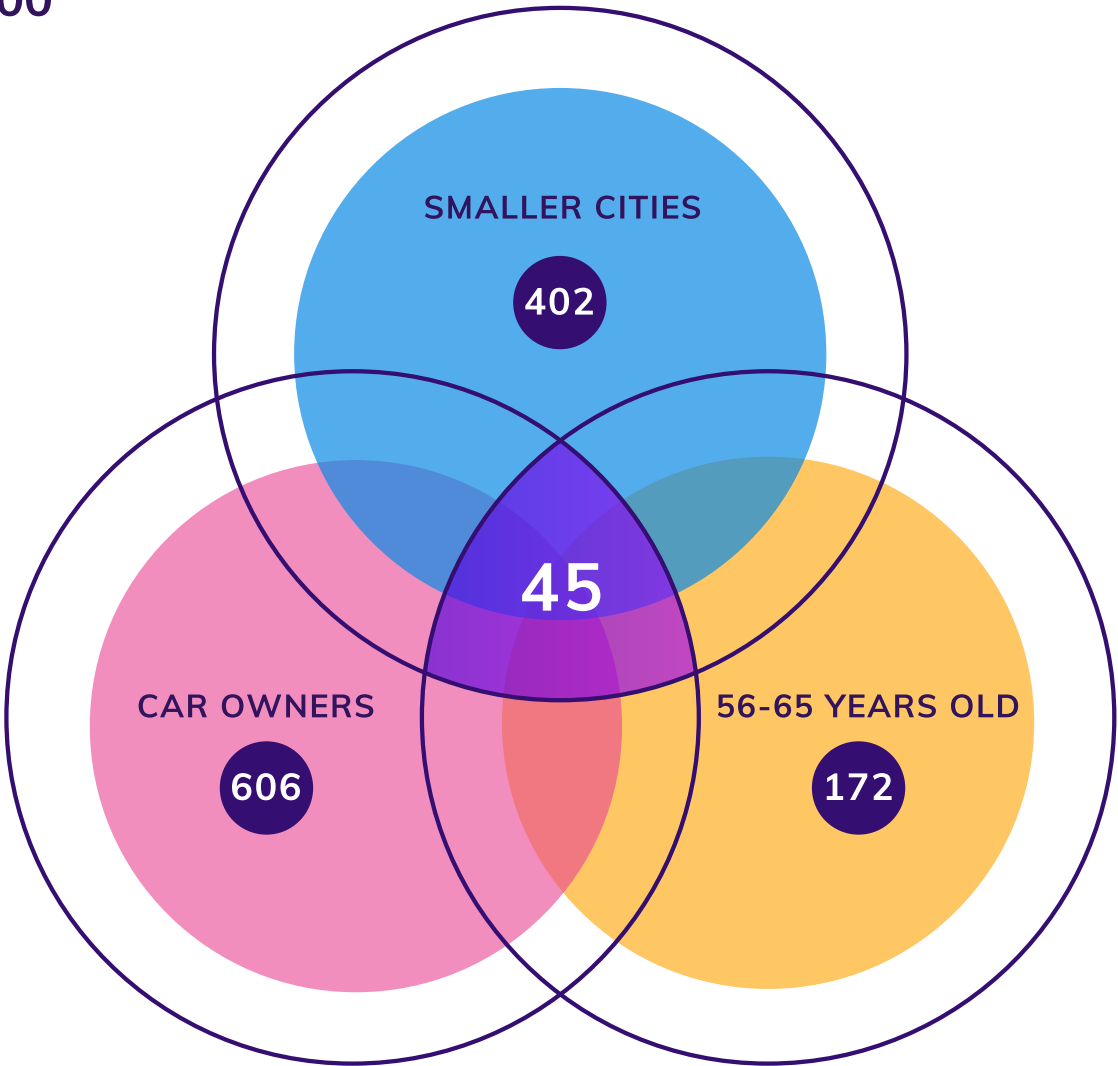
Note: As mentioned previously, even though the MRP model made calculations for the niche audience, the sample size is 1000 because the MRP model uses information for each of the respondents' characteristics separately, and therefore uses information from the entire sample.

Car Owners in Smaller Cities

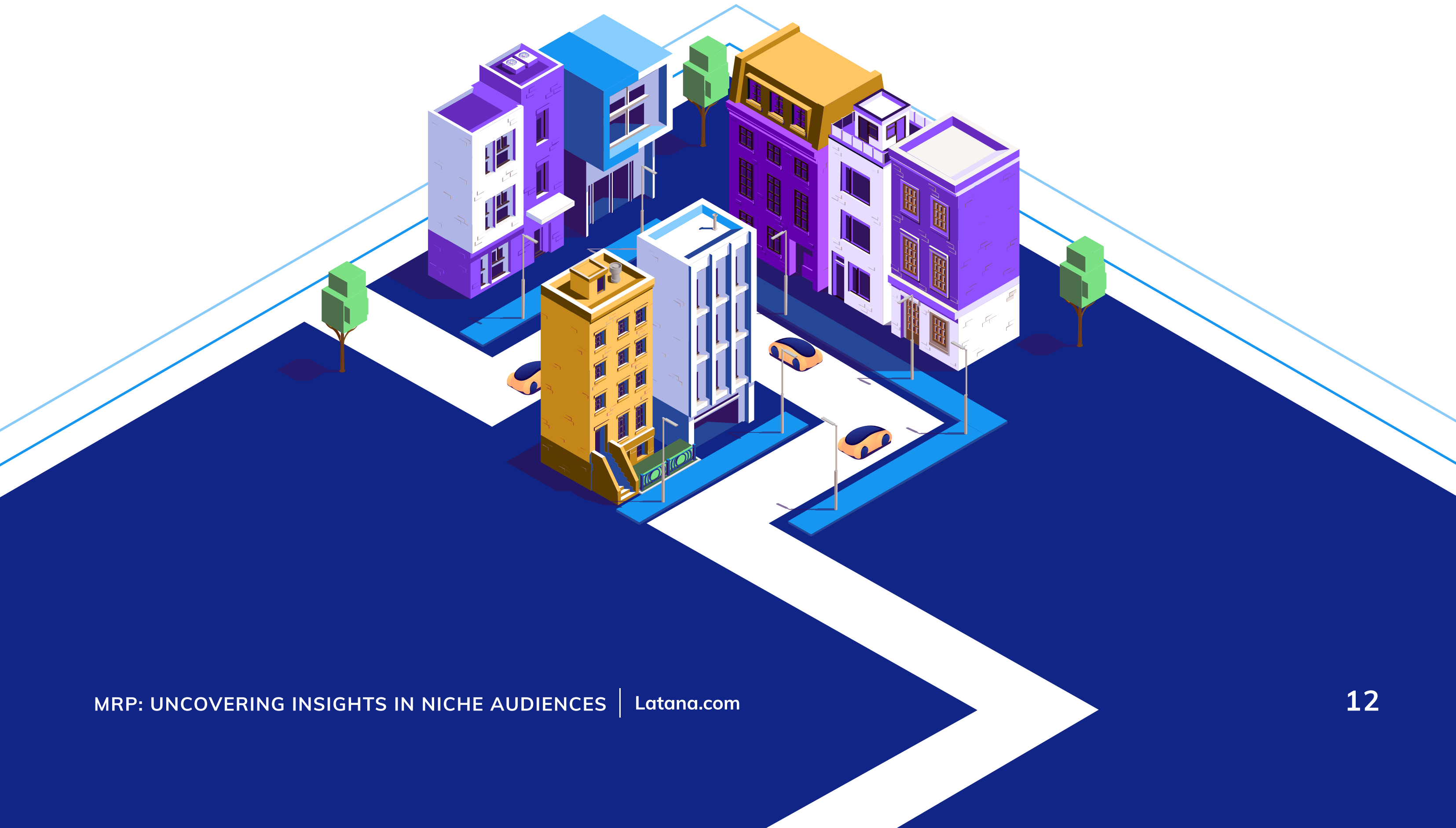
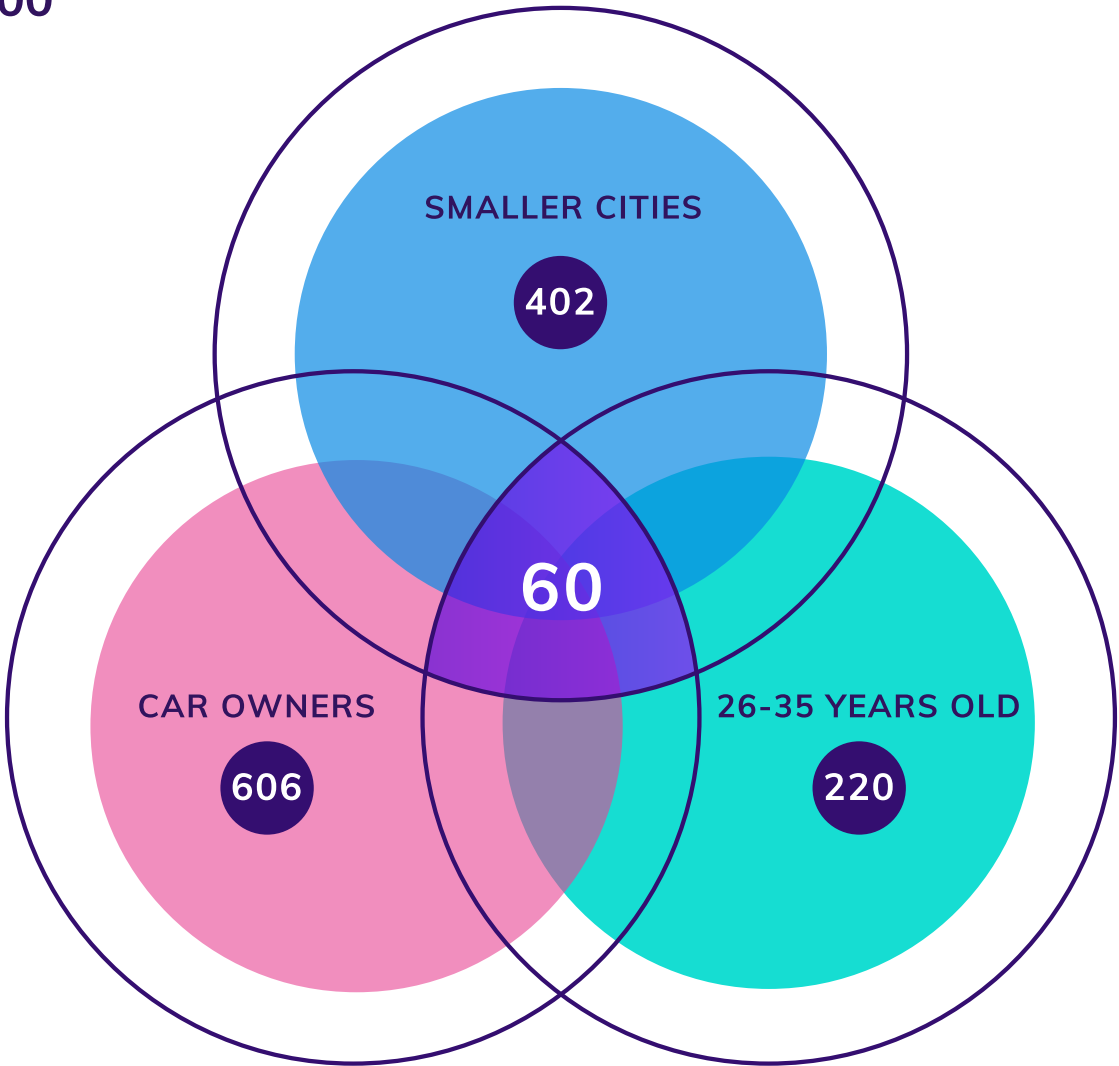
Let’s imagine for a minute that JustPark also wanted to find out if there’s a difference in brand awareness between young and older people within another niche audience: car owners who live in smaller UK cities.

The sample sizes for these niche audiences are n=45 and n=60:

OLDER PEOPLE
N = 1000

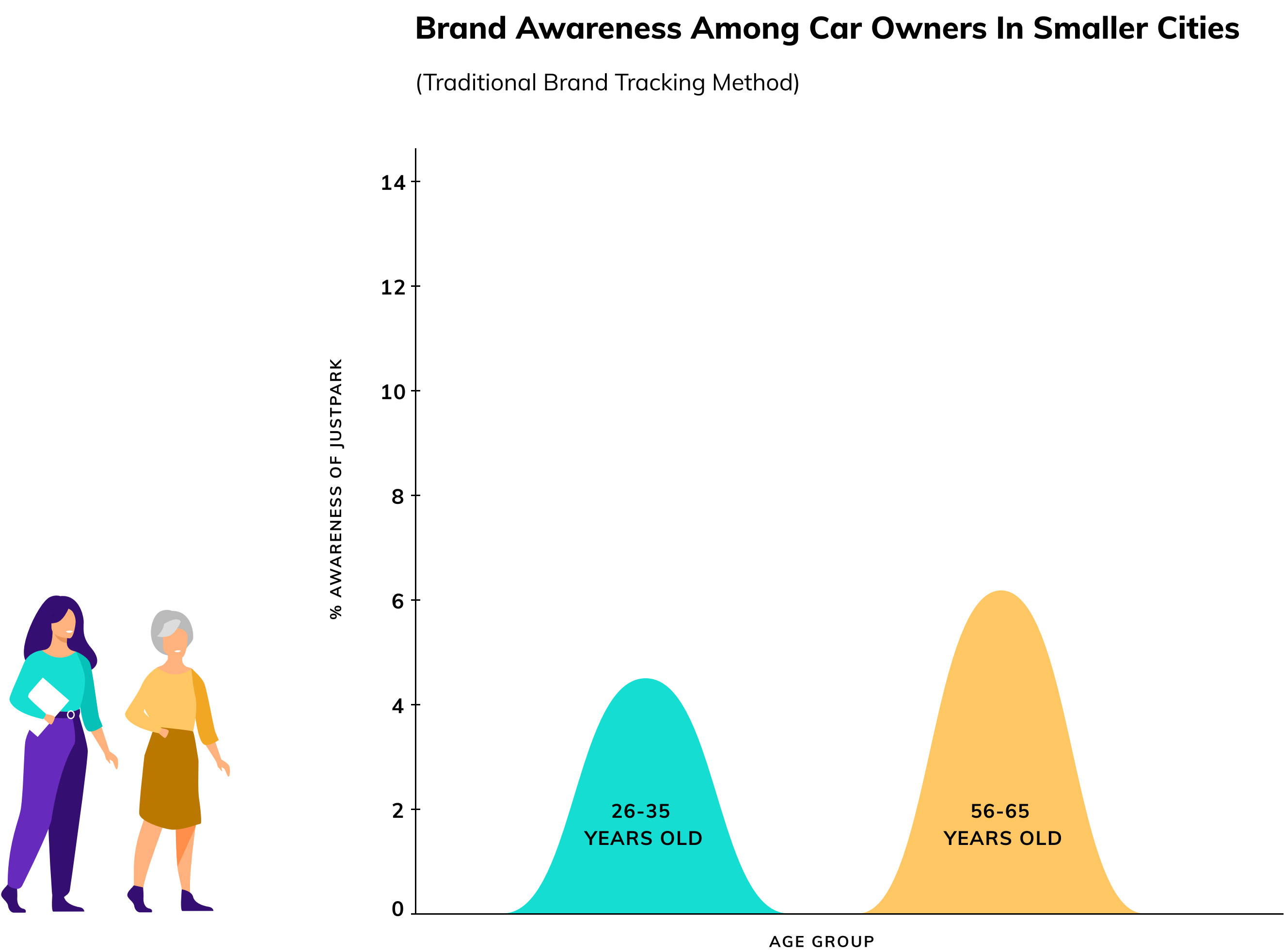


YOUNGER PEOPLE
N = 1000



Traditional Method

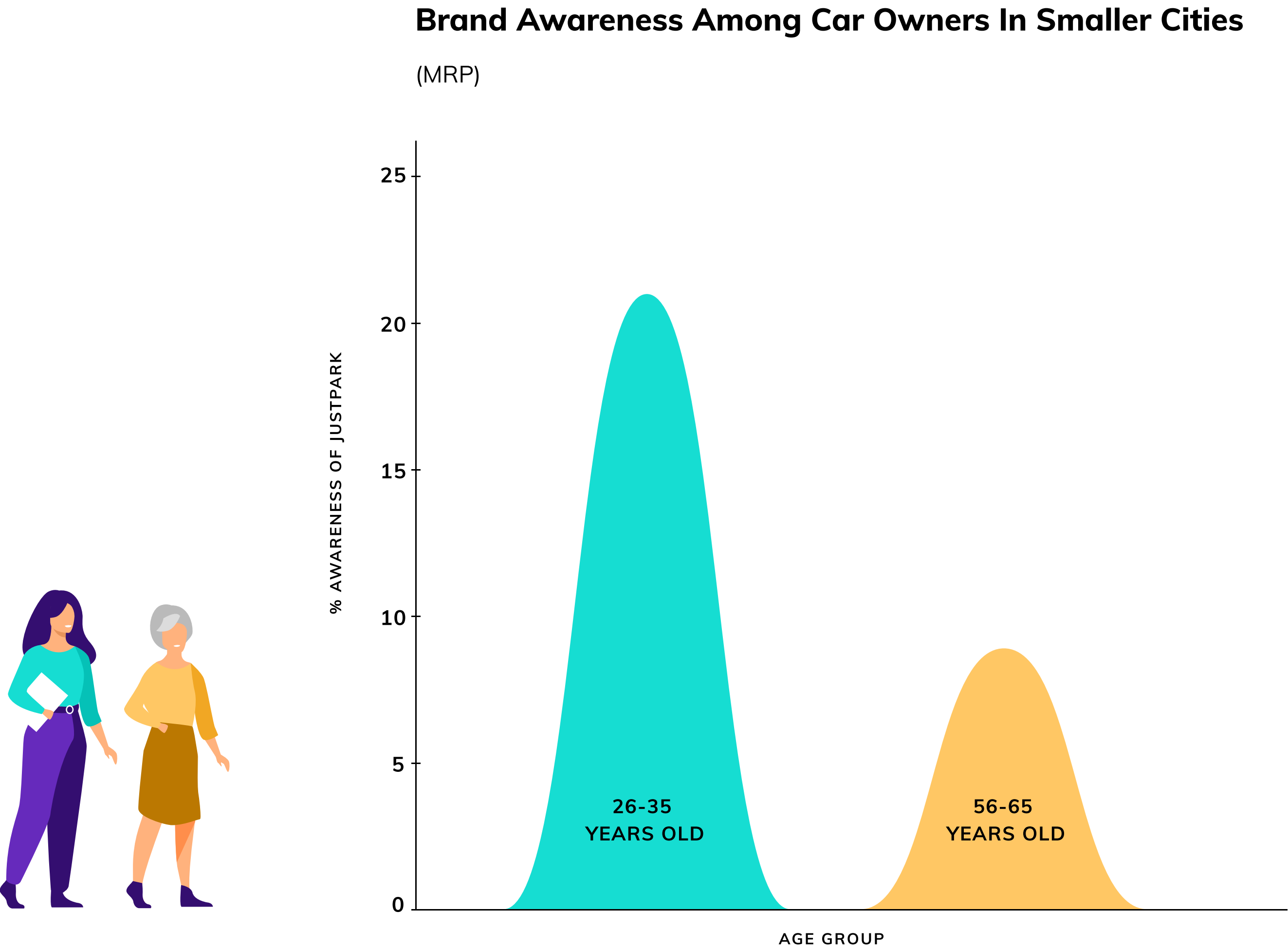
Here are the insights using the traditional method:



Again, JustPark cannot conclude that there's a difference in brand awareness between young and older people in the niche audience (the confidence intervals are so large that brand awareness can be anywhere between 0-10% and 0-14%)

MRP

For comparison, here are the insights from the MRP model:



JustPark can confidently say that also in smaller cities brand awareness among young car owners is significantly higher than among older respondents.

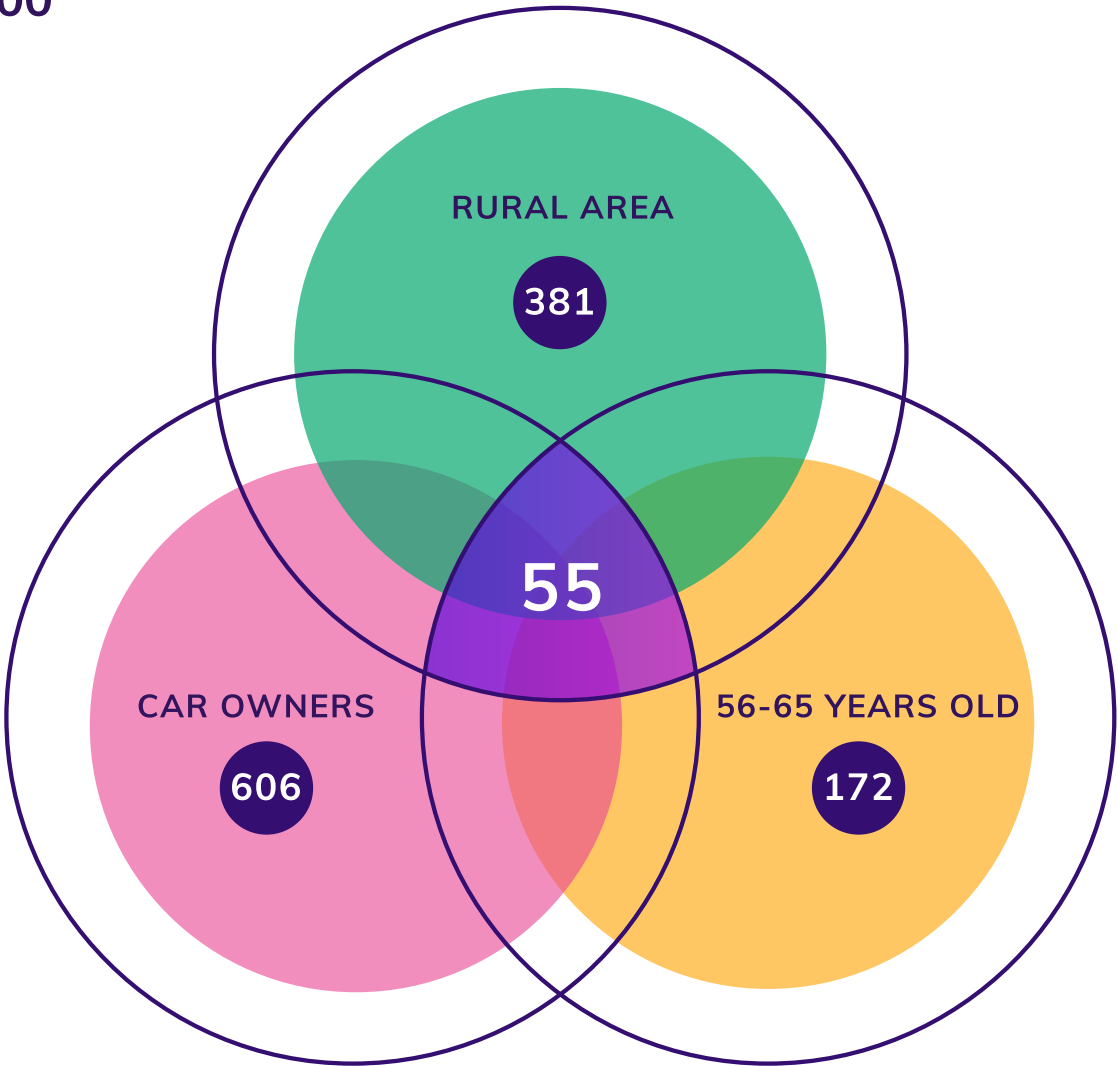
Now it's clear that there is a difference between younger and older respondents in JustPark's target audience. JustPark can confidently say that brand awareness among young car owners who live in smaller cities in the UK is around 21%. This number is significantly higher than the 9% awareness among older respondents who drive cars and live in smaller cities.

Car Owners in Rural Areas

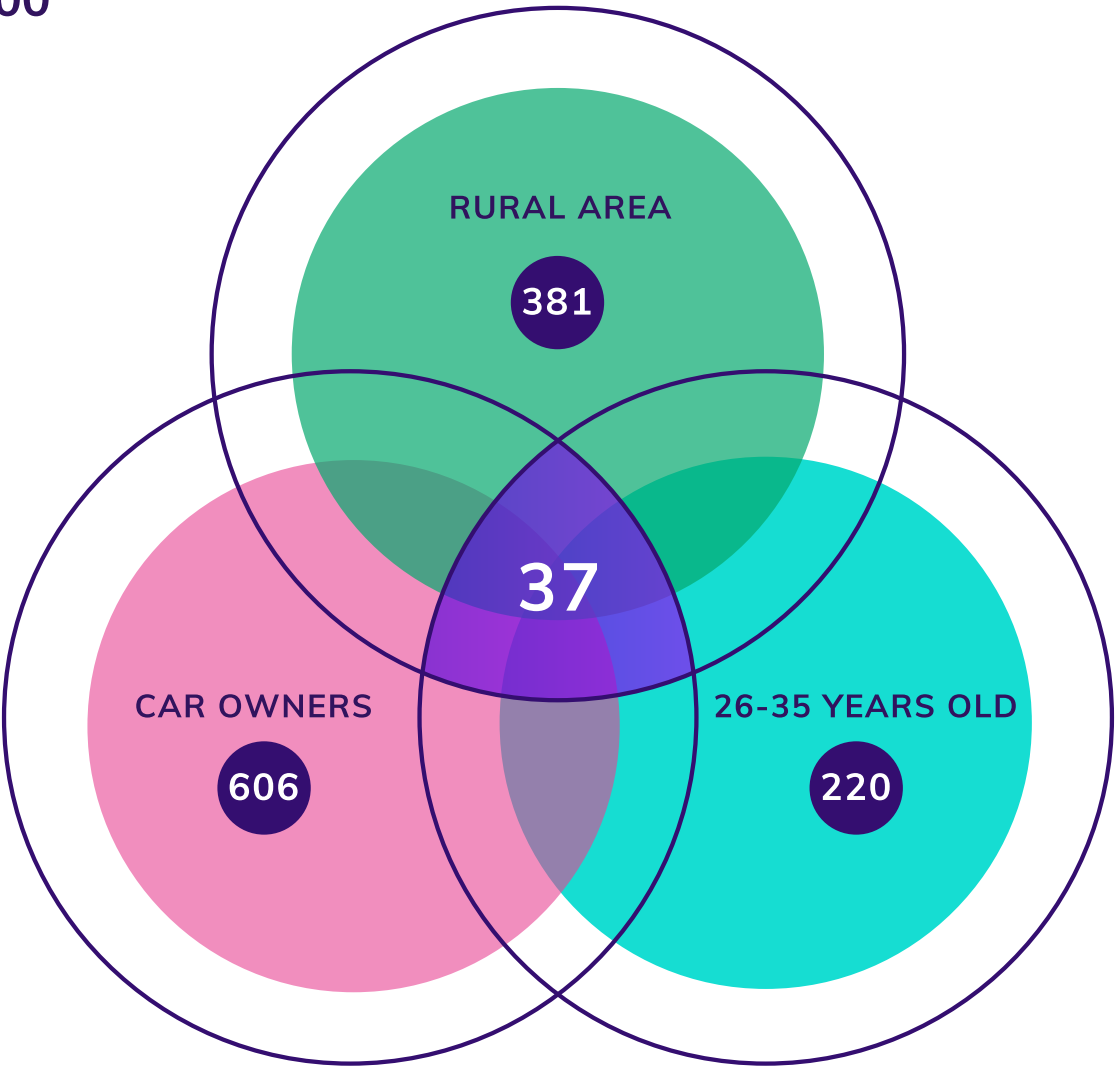
Let's look at one more niche audience: car owners who live in rural areas.

The sample sizes for these niche audiences are n=37 and n=55:

OLDER PEOPLE
N = 1000

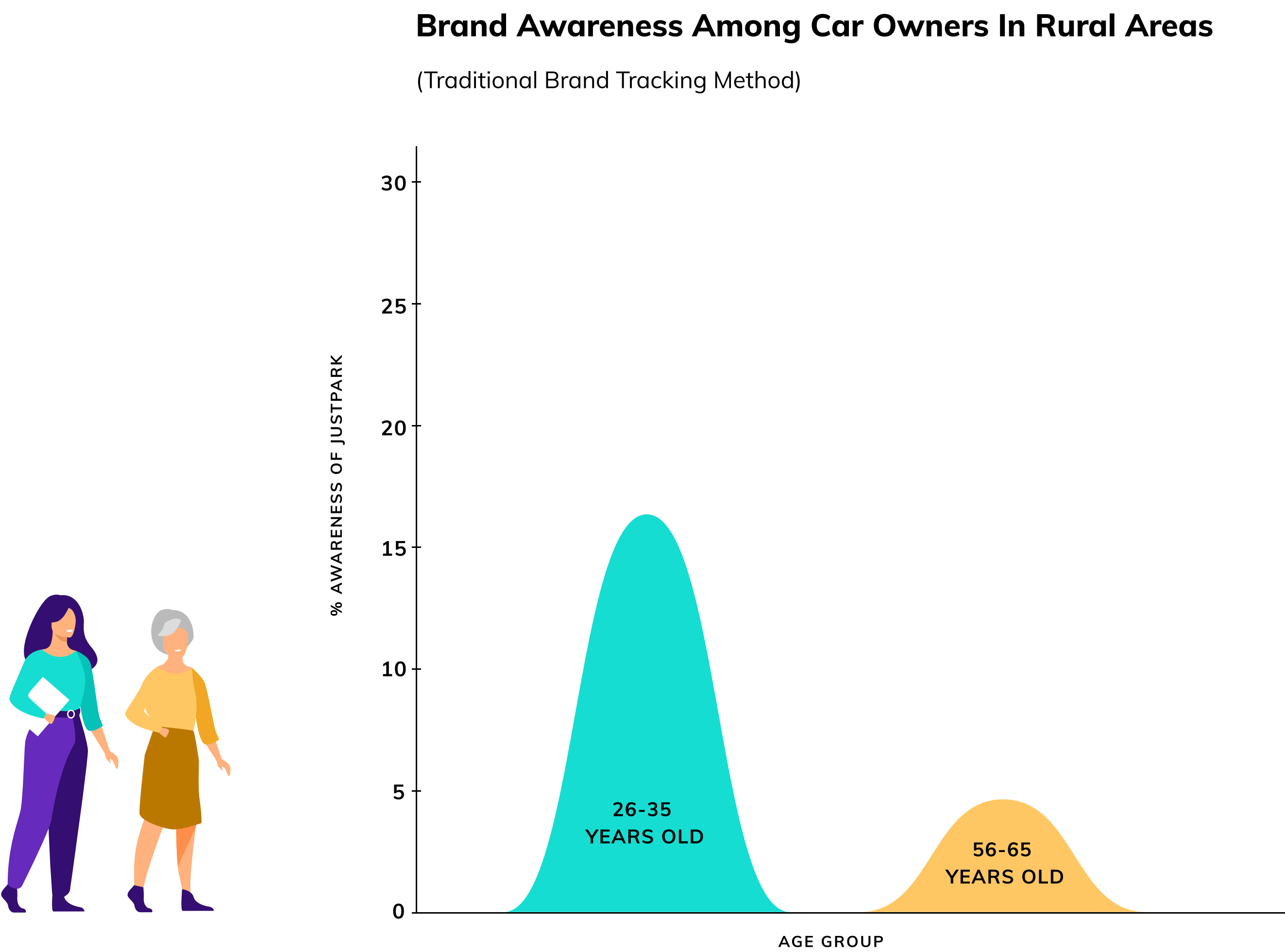


YOUNGER PEOPLE
N = 1000



Traditional Method

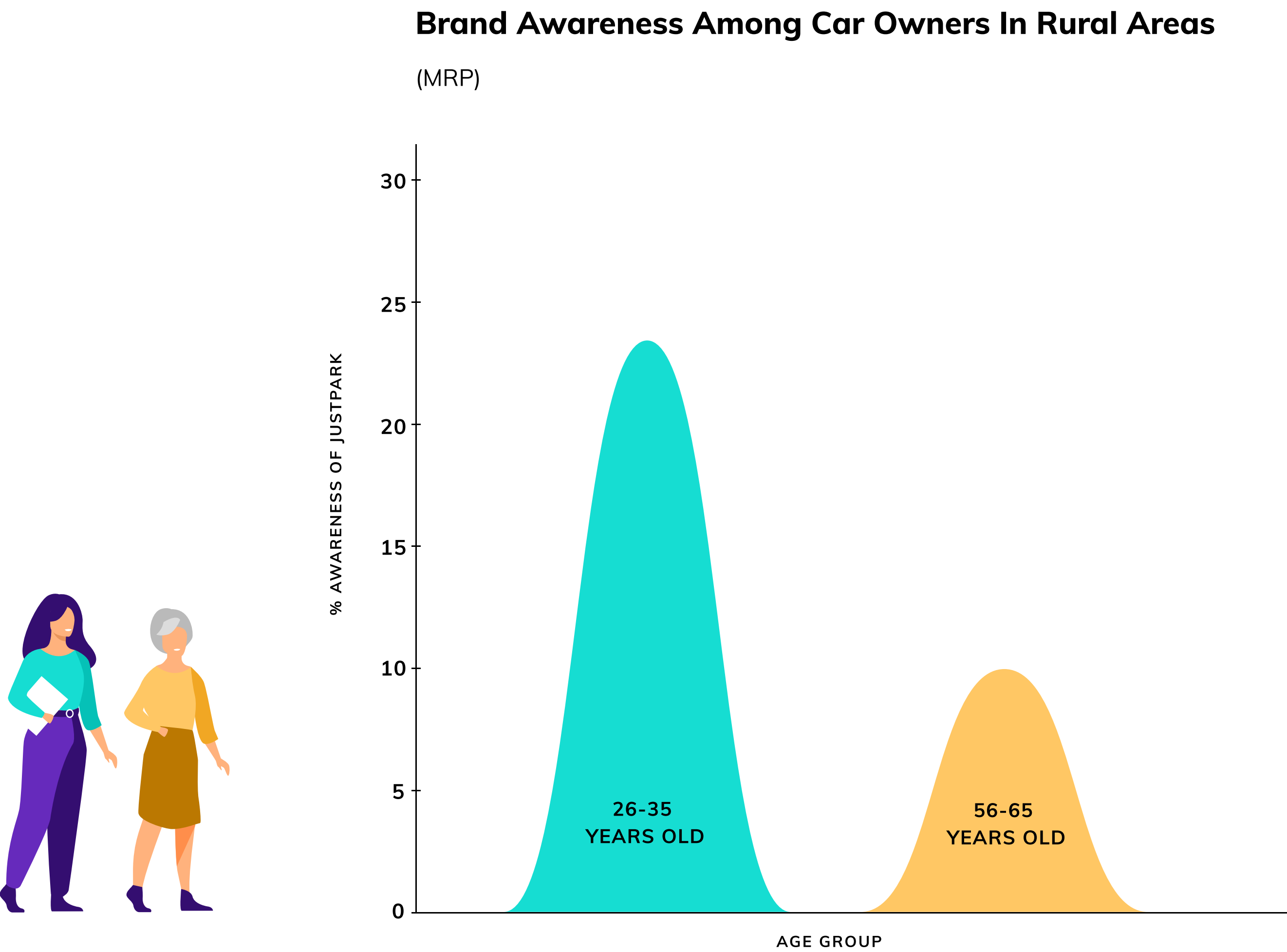
Here are the insights using the traditional brand tracking method:



Once more, JustPark cannot conclude that there’s a difference in brand awareness between young and older people in the niche audience (the confidence intervals are so large that brand awareness can be anywhere between 0-10% and 5-29%).

MRP

For comparison, here are the insights from the MRP model:



Once more, JustPark can clearly see the difference between younger and older respondents in rural areas.

Now it's clear that there is a difference between younger and older respondents in JustPark's target audience. As a result, JustPark can confidently say that brand awareness among young car owners who live in rural areas in the UK is 24%. This is significantly higher than the 10% awareness among older respondents.

Conclusion

The results of the JustPark case study have important implications for brand trackers. MRP was the only method to generate meaningful insights around how age affects brand awareness among several niche audiences. Using Latana helped JustPark discover that their marketing efforts have had a higher impact on young people in their niche audiences than older respondents. By changing the methodology behind how the survey insights are generated and moving from traditional research methods to MRP, it's possible for brand trackers to deliver the most important insights to companies who want to understand brand perception in niche audiences.

This allows brand trackers to overcome the limitations of small sample sizes. Whereas the task of measuring brand perception in niche audiences was limited by how specific these niche audiences are and how small the sample of respondents would be, now with MRP it's possible to break past these barriers. When it comes to accurate and reliable brand tracking, it is much more valuable to build a model that uses as much information as possible than it is to stick with the limits of traditional survey research. In conclusion, using MRP makes it possible to uncover insights in brand KPIs within niche target audiences with small sample sizes that would normally be considered too small.



AI-Powered Brand Tracking Make Better Brand and Marketing Decisions



**To start a conversation about the business value of
MRP in your organization, contact:**

For General Inquiries: hello@latana.com

For Sales: sales@latana.com

For PR/Partnerships: marketing@latana.com

