

Five Years of MyMAP: Consumer Awareness and Riders' Perceptions

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ABSTRACT – Motorcycles are a vital transportation mode in many low- and middle-income ASEAN countries, including Malaysia, where they make up nearly half of all registered vehicles but disproportionately contribute to road traffic injuries and fatalities. In response, Malaysia introduced the Malaysia Motorcycle Assessment Program (MyMAP), a consumer-focused star rating system aimed at promoting safer motorcycles and encouraging industry compliance with safety standards. This study examines Malaysian motorcyclists' awareness and perceptions of MyMAP, based on survey responses from 760 riders. Results show that only 25.3% of respondents have heard of MyMAP, but nearly half (50.9%) correctly identified its purpose as a motorcycle star rating program, indicating some recognition of the concept. However, only 19.1% demonstrated both awareness and accurate understanding, revealing a significant communication gap. Awareness was notably related to gender, education, occupation, and income, with higher awareness among women, lower-income groups, and those with less education. Online platforms were the main source of information (56.3%), highlighting the importance of digital outreach. Although most respondents supported the safety star rating idea and thought it could influence their purchasing decisions, nearly half (48.4%) said they would still buy a motorcycle with less than a five-star rating. These results emphasize the need for better consumer education, targeted outreach efforts, and integrating MyMAP ratings into purchasing decisions and policies to enhance its safety impact.

KEYWORDS: Motorcycle assessment program, motorcycle safety, awareness and perception; road safety, consumerism

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1. INTRODUCTION

Motorcycles serve as a critical mode of transportation in many low- and middle-income ASEAN countries, including Malaysia, Indonesia, Thailand, and Vietnam, where they represent a substantial proportion of registered vehicles. In Malaysia, motorcycles account for approximately 47% of all registered vehicles, yet they contribute disproportionately to road traffic injuries and fatalities (Azmi et al., 2014). Between 2015 and 2019, motorcyclists comprised more than 64% of all road fatalities, with around 4,000 deaths annually (Khalid et al., 2022). Trends further indicate an increasing share of motorcycles in crashes, rising from 50.0% in 2015 to nearly 52% in 2019 (Radzuan et al., 2024).

Despite these risks, motorcycles remain the preferred choice for both personal and commercial transport due to their affordability, maneuverability, and ability to navigate congestion. However, the consequences are severe: Manan and Várhelyi (2012) reported that motorcyclists account for more

than half of all road traffic fatalities in Malaysia, averaging 243 deaths per month over the past decade. Young male riders aged 16–20 years are particularly vulnerable, representing 22.5% of motorcycle-related deaths.

Numerous studies have identified factors contributing to motorcycle crashes, including reckless riding, impatience, and traffic law violations (Sultan et al., 2016), as well as collisions with passenger vehicles during lane changes and maneuvers (Kak & Zainal Abidin, 2019). Younger riders face additional risks due to inexperience, risk-taking behavior, and poor adherence to safety measures (Manan & Várhelyi, 2012).

While passenger vehicle safety has advanced considerably in recent decades, with seat belts, airbags, crumple zones, and head restraints significantly reducing occupant risk, progress in motorcycle safety has been comparatively limited (Jawi et al., 2021). Many car manufacturers have even implemented technologies designed to protect motorcyclists, yet motorcycle manufacturers have been slower to adopt comparable innovations. This imbalance underscores the need for accelerated motorcycle safety interventions.

Recognizing these challenges, Malaysia launched the Malaysia Motorcycle Assessment Program (MyMAP), a consumer-oriented star rating system modeled after the New Car Assessment Program (NCAP). MyMAP reflects a global paradigm shift toward leveraging consumer information to influence market dynamics, encouraging riders to demand safer motorcycles. The program was inspired by the success of the ASEAN NCAP, also pioneered by the Malaysian Institute of Road Safety Research (MIROS), which has driven most new passenger cars in the region toward 4- and 5-star safety ratings (Jawi et al., 2020; Abu Kassim et al., 2021).

MyMAP assessments focus on verifying safety features, ensuring production compliance, and evaluating consumer support programs, with the long-term aim of moving toward performance-based testing (Zulkipli et al., 2021). The program emphasizes active safety systems, particularly Anti-lock Braking Systems (ABS), which have been shown to reduce crashes by 26–39% (Khalid et al., 2022). As of September 2024, MyMAP has evaluated and published safety ratings for 28 motorcycle models from seven manufacturers, demonstrating increasing industry participation. Importantly, MyMAP's work is reinforced by regulatory advances, most notably the mandatory implementation of ABS on all new motorcycles above 150cc from January 2025. This legislative development validates MyMAP's emphasis on active safety technologies and is expected to accelerate ABS adoption in the Malaysian market.

Given these developments, it is essential to understand the reach, impact, and limitations of MyMAP from the consumer perspective. Measuring rider awareness, perceptions, and misconceptions will provide valuable insights into the program's effectiveness and highlight areas for further improvement. This study, therefore, aims to investigate Malaysian motorcyclists' awareness and perceptions of MyMAP, identify the factors influencing awareness, and assess areas where communication and implementation can be strengthened.

2. METHODOLOGY

This study was part of a survey on Malaysian riders' perceptions of motorcycle safety features (Faudzi et al., in press). A survey research design was employed to investigate riders' awareness of the Malaysian Motorcycle Assessment Programme (MyMAP), their perceptions of motorcycle safety technologies, and their willingness to pay (WTP) for such features. While the original survey included a wider set of variables, the present analysis focuses specifically on respondents' awareness of MyMAP and their perceptions of the program.

The questionnaire was evaluated for both reliability and validity. Content validity was first assessed through an expert review involving academicians, industry practitioners, and professional engineers specializing in motorcycle safety. These subject matter experts evaluated the clarity, content, and relevance of the items to ensure comprehensive coverage of the constructs being measured. Feedback from this process was incorporated into revisions of the instrument.

Respondents were recruited through online social media platforms (such as Facebook and WhatsApp, popular among riders) and through collaborations with road safety associations and motorcycling communities. This recruitment strategy allowed the survey to reach both urban and rural riders across different states, ensuring diversity in riding experience, motorcycle types, and exposure to safety programs. In total, 760 valid responses were obtained after data cleaning, which involved the removal of incomplete or duplicate entries

Data were analyzed using IBM SPSS Statistics. Descriptive statistics were used to summarize levels of awareness and perceptions of MyMAP. To further explore relationships between variables, crosstabulation with chi-square (χ^2) tests was employed to examine associations between demographic factors and awareness of MyMAP.

3. RESULTS AND DISCUSSION

The survey successfully gathered responses from 760 motorcyclists with varying characteristics, as shown in Table 1. A large majority (94.7%) reported holding a valid motorcycle license, with only a small minority (5.3%) riding without one. Riding frequency was generally high, with 70.9% indicating that they rode daily, and another 19.3% riding a few times a week. In terms of riding experience, most respondents were seasoned riders, with three-quarters (75.7%) reporting more than 10 years of experience, while only 3% were relatively new riders with less than one year of riding history.

Motorcycle ownership was also widespread, with 88.0% of respondents reporting ownership of at least one motorcycle. The sample was dominated by smaller-capacity motorcycles, with 70.1% riding machines of ≤ 150 cc, whereas only 6.2% reported riding larger motorcycles above 500cc. The purpose of riding further reflected the utilitarian role of motorcycles in Malaysia. The majority used motorcycles for daily commuting (72.0%), followed by recreational riding (13.3%) and other routine activities such as going to the market, school, or places of worship (13.0%). A much smaller group (1.7%) reported using motorcycles primarily for delivery or courier work.

Figure 1 presents two graphs illustrating respondents' awareness and perceptions of MyMAP. Only 25.3% of respondents reported having ever heard of the program. However, when asked what they thought MyMAP was, nearly half (50.9%) correctly identified it. This higher recognition rate suggests that the concept of a motorcycle star-rating program is intuitive and resonates with riders, even in the absence of direct exposure to MyMAP branding. These findings reveal a clear gap between awareness and understanding; while the star-rating concept is intuitive and easily recognizable, MyMAP's specific identity has not been communicated effectively. Moreover, misconceptions persist: 10.3% of respondents mistook MyMAP for a rider training program, 9.1% identified it as a safety testing program, and 27.9% admitted they did not know.

To identify the number of respondents who were both aware of and correctly understood MyMAP, we examined the subgroup who reported awareness and simultaneously selected the correct perception of MyMAP as a star-rating program. This approach, illustrated in the funnel shown in Figure 2, captures the overlap between awareness and understanding. The result shows that only 19.1% of the total sample both reported awareness and held the correct perception, indicating that true informed awareness is limited.

The funnel demonstrates the gap between reported awareness (having heard of MyMAP) and conceptual recognition (being able to identify its purpose), with the proportion of genuinely informed respondents being much smaller. This discrepancy highlights an important distinction between surface-level recognition and deep awareness. As with other consumer safety programs, individuals may be able to recognize or infer the function of a safety rating system when prompted, but true awareness built through sustained exposure, branding, and messaging requires more deliberate engagement (Roslin et al., 2020). Similar challenges were observed in the early years of New Car Assessment Programs (NCAPs), where public recognition initially lagged behind program development. Over time, however, consistent marketing communication strategies, extensive media exposure, the establishment of brand reputation, and the fostering of direct consumer engagement transformed a brand into greater consumer trust and public acceptance (Yosepha, 2025; Ivanytska & Aheicheva, 2021; Raj & Roy, 2015). This combination of strategies became a key formula behind the global recognition and credibility of the NCAP brand.

TABLE 1: Respondent's riding profile

Rider Characteristic	N	%
Motorcycle license		
Yes	720	94.7
No	40	5.3
		100.0
Riding frequency		
Daily	539	70.9
A few times a week	147	19.3
A few times a month	46	6.1
A few times a year	28	3.7
		100.0
Riding experience		
<1 year	23	3.0
1-5 years	86	11.3
6-10 years	76	10.0
>10 years	575	75.7
		100.0
Motorcycle cc		
≤150cc	533	70.1
151cc to 200cc	98	12.9
201cc to 250cc	53	7.0
251cc to 500cc	21	2.8
501cc to 800cc	26	3.4
		100.0
Purpose of riding		
Daily commuting	547	72.0
Recreational riding	101	13.3
As daily activity (for example: to market, school, place of worship, etc.)	99	13.0
Vehicle for delivery/courier work	13	1.7
		100.0
Owned motorcycle		
Yes	669	88.0
No	91	12.0
		100.0

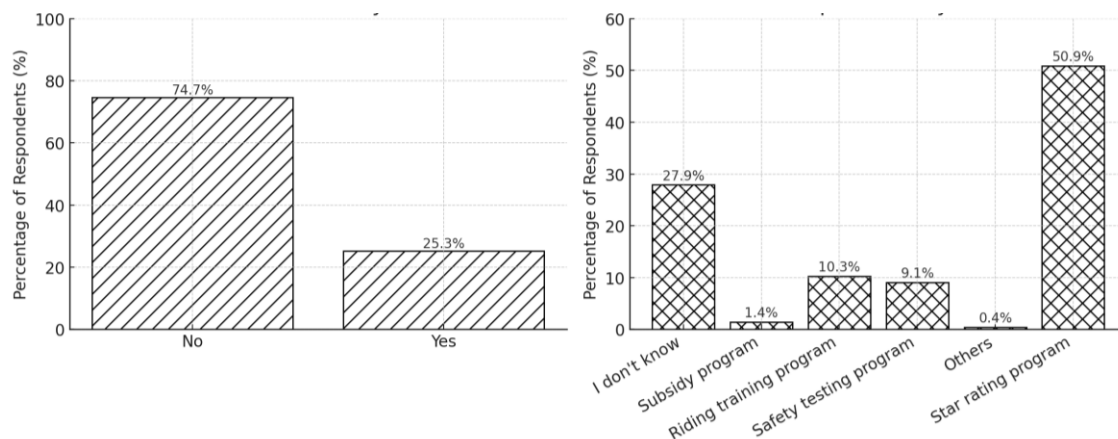


FIGURE 1: Awareness (left) and perceptions (right) of the MyMAP

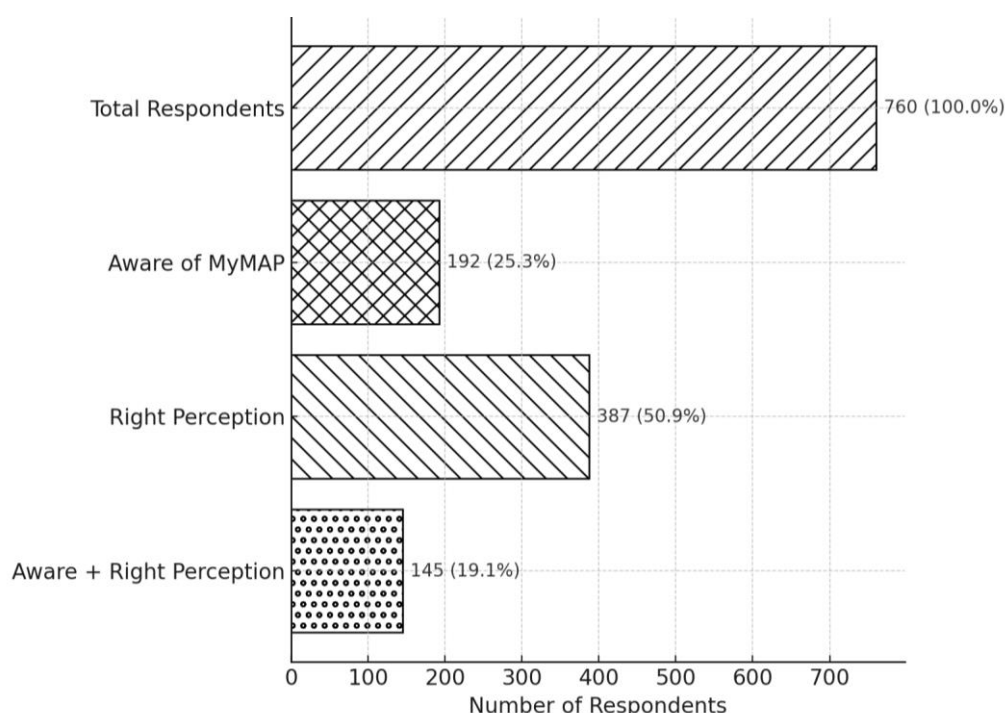


Figure 2: Funnel of awareness and understanding of MyMAP

Table 2 presents MyMAP awareness by demographic characteristics. Awareness varied across groups. By age, the highest awareness was observed among respondents aged 21–30 years (29.2%), while the lowest was among those aged 60 years or older (18.2%). This difference was not statistically significant. In contrast, gender differences were significant, with women (32.2%) more likely to report awareness than men (23.7%). Education level was also significantly related to awareness, with respondents who had only secondary school education showing the highest awareness (29.7%), while those with pre-university or certificate-level qualifications showed the lowest (7.8%). Occupation emerged as another significant determinant, with unemployed (42.9%) and self-employed (32.3%) respondents exhibiting higher levels of awareness compared to those working in the private sector (21.9%). A similar pattern was observed for household income: awareness was highest among those with no income (40.0%) and those earning below RM3,000 (32.4%), while only 18.0% of respondents earning above RM15,000 reported awareness of MyMAP.

The findings suggest that socioeconomic factors such as education, occupation, and income play a more significant role than age or gender in shaping awareness of MyMAP. Awareness was notably higher among respondents with only secondary schooling, the unemployed, the self-employed, and those with no income or earnings below RM3,000. These groups are also more reliant on motorcycles for commuting and for their livelihoods. Similar trends have been reported in Roslin et al. (2020) and Sultan et al. (2016). By contrast, respondents with pre-university or certificate-level qualifications, those employed in the private sector, and individuals with higher incomes above RM15,000 reported the lowest awareness, which may reflect a lesser reliance on motorcycles and fewer touchpoints with safety campaigns.

Figure 3 presents the distribution of sources from which respondents reported obtaining information about motorcycle safety and the MyMAP program. Online platforms including social media and news websites were the most frequently cited source, accounting for more than half of the responses (56.3%). Friends and family represented the second most common source (13.6%), followed by motorcycle magazines or blogs (11.5%) and public announcements or community programs (11.2%). Manufacturers or dealerships were mentioned less frequently (7.1%). The dominance of online platforms highlights the increasing role of digital media as the primary channel for disseminating motorcycle safety information. This finding suggests that awareness campaigns and safety initiatives targeting riders should prioritize online engagement, particularly through social media and widely

accessed news portals. The relatively modest contributions from traditional sources such as manufacturers, dealerships, and print media indicate limited outreach efforts by these stakeholders or reduced reliance on conventional communication channels by riders.

TABLE 2: Awareness of MyMAP by demographic characteristics

Category	Awareness of MyMAP					
	Yes, n	%	No, n	%	Total, n	%
Age						
16–20 years	3	1.6	8	1.4	11	1.4
21–30 years	31	16.1	75	13.1	106	13.9
31–40 years	80	41.7	225	39.4	305	40.1
41–50 years	59	24.0	187	32.7	246	32.4
51–60 years	15	21.4	55	9.6	70	9.2
>60 years	4	18.2	18	3.2	22	2.9
	100.0		100.0		100.0	
Gender^a						
Female	46	24.0	97	17.1	143	18.8
Male	146	76.0	471	82.9	617	81.2
	100.0		100.0		100.0	
Education^b						
Secondary school	57	29.7	98	17.3	155	20.4
Pre-university / Certificate	15	7.8	53	9.3	68	8.9
Diploma	50	26.0	142	25.0	192	25.3
Bachelor's degree	51	26.6	224	39.4	275	36.2
Postgraduate (Master/PhD)	19	9.9	51	9.0	70	9.2
	100.0		100.0		100.0	
Occupation^c						
Government / statutory body	44	22.9	141	24.8	185	24.3
Private sector	85	44.3	304	53.5	389	51.2
Self-employment	32	16.7	67	11.8	99	13.0
Retired / student	7	3.6	24	4.2	31	4.1
Unemployed	24	12.5	32	5.6	56	7.4
	100.0		100.0		100.0	
Income^d						
No income	18	9.4	27	4.8	45	5.9
≤ RM 3,000	77	40.1	161	28.3	238	31.3
RM 3,001 – RM 5,000	35	18.2	154	27.1	189	24.9
RM 5,001 – RM 15,000	53	27.6	185	32.6	238	31.3
≥RM 15,001	9	4.7	41	7.2	50	6.6
	100.0		100.0		100.0	

Chi-square analyses comparing MyMAP awareness between demographics

a $\chi^2(1, N = 760) = 4.4, p < .05$

b $\chi^2(4, N = 760) = 18.0, p < .05$

c $\chi^2(4, N = 760) = 14.4, p < .05$

d $\chi^2(4, N = 760) = 18.6, p < .05$

Figure 4 shows an infographic illustrating respondents' perceptions of MyMAP across three key dimensions: the need for a safety star rating, its influence on purchase decisions, and willingness to buy motorcycles rated below five stars. Results show strong support for the program, with 84.1% agreeing that new motorcycles should carry a safety rating and 81.1% stating that such information would influence their purchase. However, support drops when it comes to actual buying behavior, as nearly half (48.4%) indicated they would still purchase a motorcycle with less than a five-star rating, while others expressed uncertainty (22.9%) or refusal (28.7%). This pattern highlights a clear gap between positive attitudes toward safety ratings and actual consumer choices, suggesting that while the star-rating concept resonates with riders, affordability, model availability, and other practical considerations may limit its impact unless reinforced by stronger consumer education, incentives, or regulatory measures.

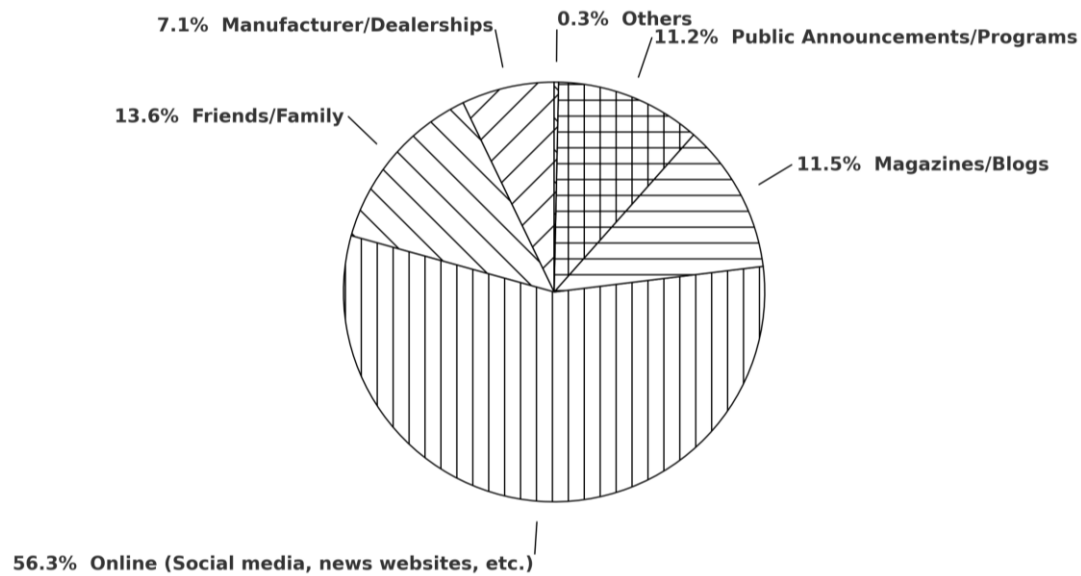


FIGURE 3: Respondents' source of information about MyMAP

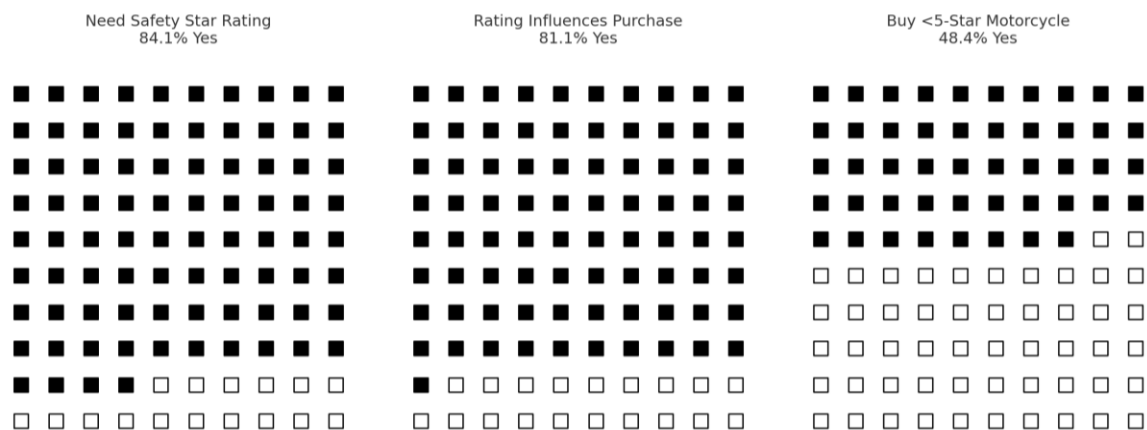


FIGURE 4: Respondents' support and purchase intentions related to MyMAP

4. LIMITATION

This study employed a convenience sampling approach, which may limit the generalizability of the findings. Respondents were recruited mainly through online platforms and rider community networks, making participation voluntary and dependent on internet access and personal willingness to respond. As a result, riders from rural areas or those with limited internet connectivity may have been underrepresented. In addition, the use of self-reported online questionnaires is subject to recall errors and social desirability bias, which may affect response accuracy.

5. CONCLUSION

This study highlights important gaps in Malaysian riders' awareness and perceptions of the Malaysia Motorcycle Assessment Program (MyMAP). Although almost half of the respondents correctly identified the purpose of the program, only a quarter had heard of it, and just 19.1 percent demonstrated both awareness and accurate understanding. Awareness was greater among women, those with lower incomes, and those with less formal education, groups that are also most vulnerable to crashes, whereas recognition was limited among higher-income and professional groups. Online platforms

emerged as the dominant source of information, showing the importance of digital outreach, while traditional channels, such as manufacturers and dealerships, contributed little.

Riders expressed strong support for the concept of safety ratings, yet nearly half indicated they would still purchase motorcycles rated below five stars. This gap between positive attitudes and purchasing behavior suggests that MyMAP must strengthen its branding, expand consumer education, and integrate safety ratings more firmly into consumer choices and policy frameworks to drive wider adoption of safety technologies.

Overall, the findings highlight the need for stronger outreach and communication strategies to improve riders' awareness and understanding of MyMAP. In addition, to enhance the response rate and representativeness of future surveys, subsequent studies should consider adopting probability-based sampling methods and mixed-mode data collection approaches to achieve broader demographic and geographic coverage.

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