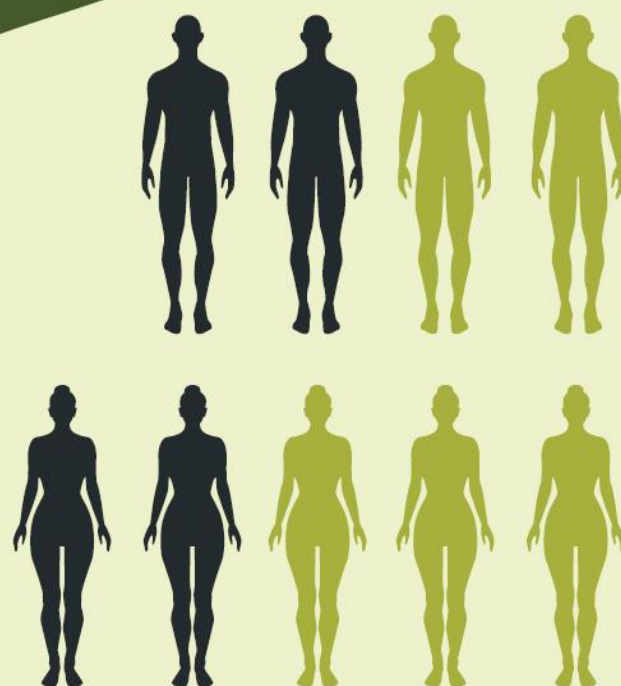


Gallup Pakistan Health Cyber Letter, Edition 7

NUTRITION AND HEALTH IN PAKISTAN



EDITOR'S NOTE

Pakistan prides itself on the variety of food choices it offers. In general, from savory vegetables, lentils and meat curries to sweet *mithais*, *gulab jamuns* and *kulfas*, there's something for everyone. There is also tremendous diversity of food restaurants in Pakistan, ranging from small dhabas to fast food chains and close to Michelin star restaurants. But how much of what Pakistanis eat is actually healthy? How much meat are Pakistanis consuming? And are they aware of their nutritional requirements?

In the 7th edition of our Health Cyberletter, "***Nutrition and Health in Pakistan***," we ask some important questions from Pakistanis regarding their eating habits. From the number of cups of tea per day to salt intake and the preference for different types of meat, we've gathered data on eating habits of Pakistanis in 2022 and compared statistics with our data from earlier research conducted over the years. Quite interestingly, our data represents some healthy lifestyle changes such as the reduction in red meat consumption and the increase in vegetable consumption over the years. While it's difficult to make any definitive claims against the statistics, what can be generally inferred is that Pakistanis have become slightly more conscious of their nutritional choices. At present, we haven't examined why this trend has emerged in recent years but perhaps more awareness surrounding the damaging repercussions of poor diets might have a role to play.

While much of our current research focuses on the behavioral dimensions of food consumption of an average Pakistani, it is pertinent to mention that the country suffers from alarming rates of childhood malnutrition. Little progress has been made with **42%** prevalence of stunting and approximately **15%** prevalence of wasting in the country.¹ Widespread poverty and food insecurity have dampened the effects of malnutrition within Pakistan. While steps have been taken by the government to address the challenges over the years, there still remains much work to be done to achieve food security and improve nutrition indicators. Sustainable Development Goals 2 and 3 provide a platform for countries to work towards improving their nutritional status by focusing on ending hunger and achieving food security as well as aiming to promote well-being for all ages.²

Pakistan has a long hard road ahead in terms of achieving better nutritional indicators but with concerted and collaborative efforts by health stakeholders, we can devise efficient and effective strategies to address our nutritional challenges and work towards a healthy Pakistan.

We hope this research can provide some support to researchers and practitioners as they attempt to understand Pakistanis' behaviors and solve complex health problems in future.

Mishalle A. Kayani

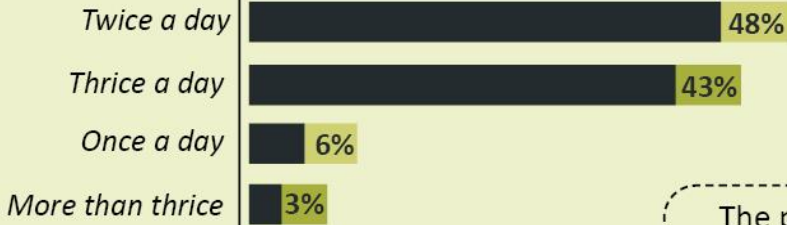
¹ <https://tribune.com.pk/story/2400427/over-42-children-stunted-in-pakistan#:~:text=ISLAMABAD%3A,of%20girls%20suffer%20from%20obesity.>

² Global Nutrition Report, 2017

NUTRITION AND HEALTH IN PAKISTAN



(In 2022, the majority (48%) of Pakistanis reported eating meals twice a day, (43%) have three meals, (6%) have one meal and (3%) eat meals more than thrice in a day.



Compared with 2005, there was approximately a 10% increase in vegetable consumption as reported by Pakistanis (44% in 2005 versus 53%) in 2022.



Among the (92%) who take tea, regular tea was used in (91%) of the households followed by green tea (45%) and coffee in (24%) of households.



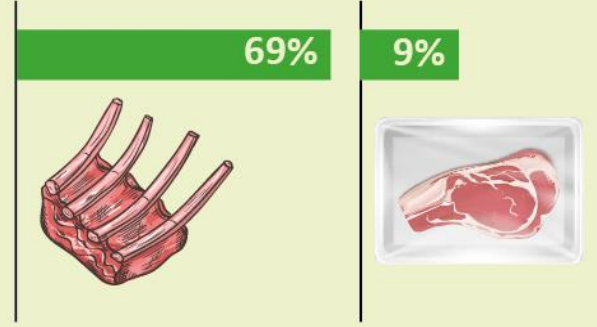
Majority (**76%**) of our population considered oil to be better for health as compared to ghee in 2022.



The preference for mutton has increased two-fold over the last two decades, from (20%) in 1999 to (41%) while the reverse holds true for beef as the preference has declined from (49%) in 1999 to (23%) in 2022.



In 2022, people preferred to buy fresh meat from the butcher's shop (69%), only (9%) use frozen meat and (21%) use fresh or frozen, as available.



INTRODUCTION

Nutrition has an important role in maintaining human health. Lifestyle factors have already been established as significant contributors to the health and well-being of individuals and within these factors, our nutritional choices also play a vital role in influencing our physical, cognitive and economic potential.

FOOD PATTERNS

For Pakistanis, through our most recent data, we observe that the majority (**50%**) preferred to eat a “*paratha*” in the mornings. We also observed that this has largely held true over the past decade (*Figure 1.1 and Trend Data 1.2*). In 2022, at lunch and dinner, roti was the staple diet (**73%**) and (**70%**), respectively followed by rice (**14%**) and (**14%**) respectively (*Figure 1.3*). Approximately half (**47%**) reported having a normal amount to eat during lunch and dinner (*Figure 1.6*). In 2013, at least (**40%**) people were reporting eat more at both times while only (**10%**) were reporting eating a normal amount (*Trend Data 1.7*). This is indicative of a clear shift in behavioral patterns over the span of a decade.

In 2022, the majority (**48%**) of Pakistanis reported eating meals twice a day, (**43%**) have three meals, (**6%**) have one meal and (**3%**) eat meals more than thrice in a day (*Figure 1.8*). The majority of our respondents (**51%**) were also of the opinion that meals should be taken thrice a day (*Figure 1.10*).

MEAT CONSUMPTION

Among meat consumption, the choices of Pakistani's include a mix of mutton (**41%**), chicken (**35%**) and beef (**23%**) (*Figure 1.12*). The preference for mutton increased two-fold over the last two decades, from (**20%**) in 1999 to (**41%**) while the reverse holds true for beef as the preference has declined from (**49%**) in 1999 to (**23%**) in 2022 (*Trend Data 1.13*). Overall, last year, the use of white meat (**63%**) outweighed the use of red meat (**37%**) in Pakistani households (*Figure 1.14*). Again, close to two decades ago, more people preferred red meat (**59%**) in 2005 versus (**37%**) in 2022 (*Trend Data 1.15*). (**1 in 3**) Pakistanis also reported eating meat at least two to three times a week (*Figure 1.16*).

PREFERENCE FOR FOOD COMPONENTS

Through our data, we also attempted to capture some basic economic drivers behind eating patterns. For example, given the option of having no financial constraints a uniform price across meat, pulses and vegetables, (**53%**) Pakistanis preferred vegetables, (**34%**) preferred meat and (**11%**) preferred pulses to be the main component of their daily diet (*Figure 1.18*). Compared with 2005, this represents almost a 10% increase in vegetable consumption as reported by Pakistanis (**44% in 2005 versus 53%**) in 2022 (*Trend Data 1.19*). The majority of our respondents also reported liking food with a normal level of spice (**52%**) (*Figure 1.20*).

IDEAS ABOUT FROZEN FOOD

People preferred to buy fresh meat from the butcher's shop (**69%**), only (**9%**) used frozen meat and (**21%**) used fresh or frozen, as available in 2022 (*Figure 1.22*). Majority (**59%**) of our population also considered frozen foods as good while (**37%**) claimed that it is not good to use frozen foods (*Figure 1.24*). Incorporating frozen food into the diet for prolonged periods can lead to lower nutritional value.

TEA

For health experts, tea goes beyond just being a symbol of culture and social gatherings. There is research on its antioxidant properties as well as its addictive characteristics. Among the **(92%)** who take tea, regular tea was used in **(91%)** of the households followed by green tea **(45%)** and coffee in **(24%)** of households (*Figures 1.26 and 1.28*). Users of tea have increased by **(15%)** over the 2009-2022 period (*Trend Data 1.27*).

The majority of tea drinkers **(41%)** reported taking three or more cups daily, **(35%)** reported having tea two times a day whereas **(25%)** claimed to have only one cup daily in 2022 (*Figure 1.32*).

SALT CONSUMPTION

In 2022, **(40%)** Pakistanis considered iodized salt to be beneficial for health, **(17%)** considered it to be harmful, **(17%)** thought that it is neither beneficial nor harmful and **(25%)** said they were not aware of the effects on health (*Figure 1.34*). A third of the population was aware about the benefits of iodized salt. This is further reflected in the trends of its usage where only **(34%)** claimed using iodized salt daily in their diet, **(22%)** used it sometimes and **(35%)** never used it (*Figure 1.36*).

On the contrary, trend data reveals that over the 2008-2022 period, the proportion of those who used iodized salt daily or sometimes declined, while data for those who never used it increased by **(15%)** from **(23%)** in 2008 to **(35%)** in 2022 (*Trend Data 1.37*).

OILY FOOD

Majority **(76%)** of our population considered oil to be better for health as compared to ghee (*Figure 1.38*). However, a fairly large percentage **(23%)** of households reported using oil and ghee for cooking, **(35%)** reported using oil only and exclusive ghee users were **(42%)** (*Figure 1.40*).

ATTITUDES TOWARDS DIET

In 2022, regarding the attitudes of people about their diet, **(63%)** of our respondents reported they read the ingredients of the pack before buying a packaged food item to learn about healthy foods but **(36%)** did not consider it necessary to add healthy food to their diet (*Figure 1.42*). **(33%)** of our respondents claimed that they often decided on a brand for anything through advertisements, while **(20%)** were of the opinion that frozen food is just as good as fresh food (*Figure 1.42*). There appear to be some interesting change in food preferences over time which can be attributed to change in food prices and/or awareness about health aspects of diet.

DISCUSSION

The Pakistan Dietary Guidelines for Better Nutrition (PDGN) are comprehensive country specific guidelines for the general public to adopt healthy eating practices, prevent and reduce the risk of infectious and chronic diseases. The guidelines are not technically challenging but rather simple to adopt. They provide age and gender appropriate as well as culturally acceptable options to choose nutritious foods. These guidelines were developed by the Ministry of Planning, Development and Reforms of Pakistan.

The PDGN recommend the daily consumption of basic food groups including cereal grains and grain products, meat, pulses and eggs, milk and milk products, vegetables and fruits. The guidelines suggest that the consumption of refined cereals should be reduced and substituted by wholegrain cereals while the consumption of fresh fruits, vegetables, pulses, meat and milk be increased as per body requirements. It is further recommended that the use of salt, sugar, saturated fats, trans-fatty acids, cooking oil, sweets, soft drinks, artificial juices, fruit/flavored drinks and beverages, refined and processed foods should be limited³.

Excessive use of non-iodized salt, sweetened tea, oily items like paratha and curry, and processed or frozen foods can have detrimental results on the health of not only adults, but also the children in such households. It is important that community leaders, schools and television campaigns inform the population of health risks of adopting an imbalanced diet, along with stressing on the benefits of healthy eating. From the governments' perspective, subsidizing or supporting sellers of healthier items can nudge the public into shifting their preferences.

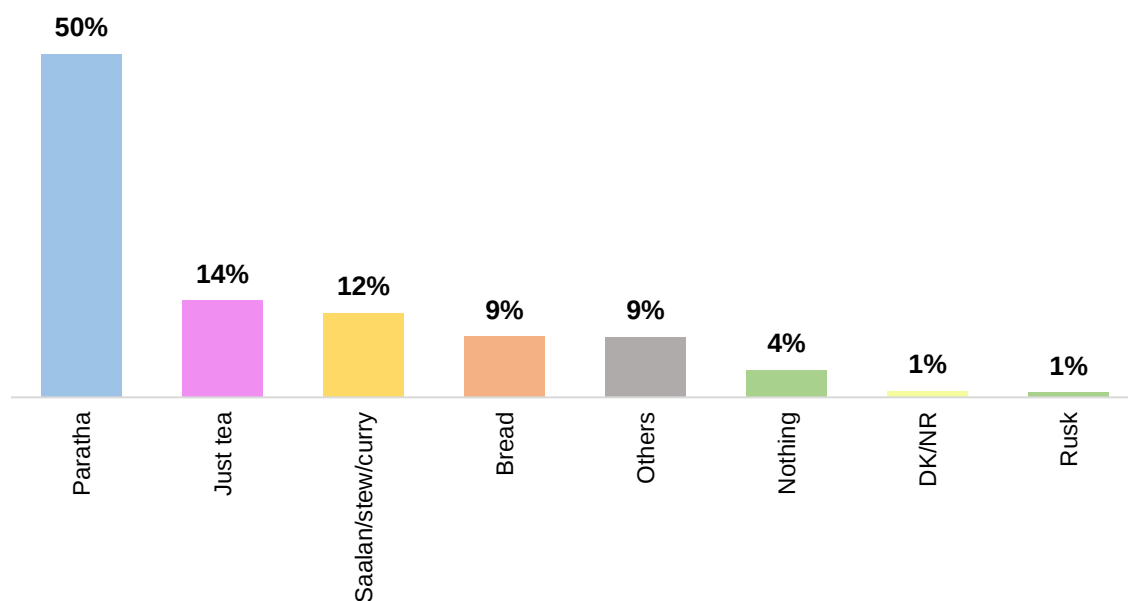
It will take a combined effort on all fronts to change public perception about healthy food items. A healthier diet is not only critical for physical reasons but also helps improve quality of life in the long run.

Note: Data representation below.

³ [https://www.pc.gov.pk/uploads/report/Pakistan Dietary Nutrition 2019.pdf](https://www.pc.gov.pk/uploads/report/Pakistan_Dietary_Nutrition_2019.pdf)

FOOD PATTERNS

1.1. Question: Mostly, what do you like to take in your breakfast?

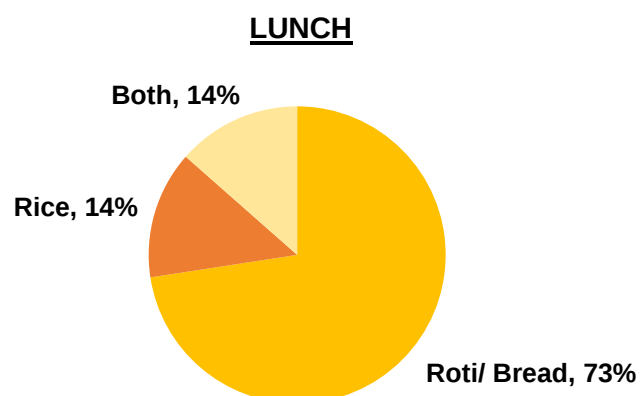


Source: Gallup Pakistan Survey, 2022

1.2. Trend Data

	2006	2008	2012	2013	2016	2022
Paratha	45%	41%	46%	53%	41%	50%
Bread	10%	11%	15%	12%	23%	9%
Rusk	-	-	-	-	-	1%
Saalan /Stew/Curry	34%	33%	25%	31%	16%	12%
Just tea	11%	13%	13%	19%	10%	14%
Nothing	-	-	-	-	-	4%
Others	-	-	-	1%	9%	9%
Don't know / No response	-	2%	1%	0%	1%	1%

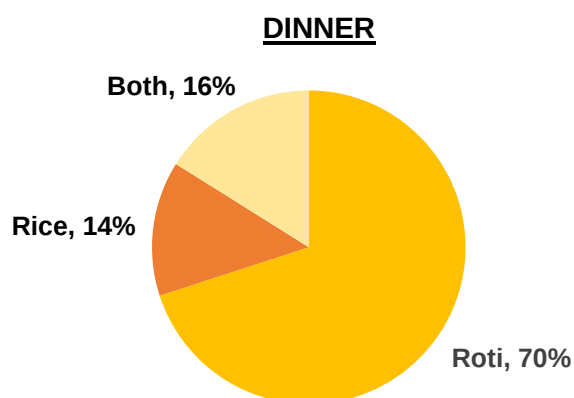
1.3. Question: Mostly, what do you eat at lunch and dinner?



Source: Gallup Pakistan Survey, 2022

1.4. Trend Data

	1999	2000	2006	2008	2009	2010	2012	2013	2015	2016	2022
Roti/ Bread	70%	90%	85%	77%	65%	66%	70%	69%	62%	57%	73%
Rice	28%	10%	14%	21%	15%	31%	14%	30%	15%	18%	14%
Both	2%	-	-	-	20%	-	15%	0%	23%	25%	14%
DK/NR	0%	-	1%	2%	-	3%	1%	1%	0%	-	-

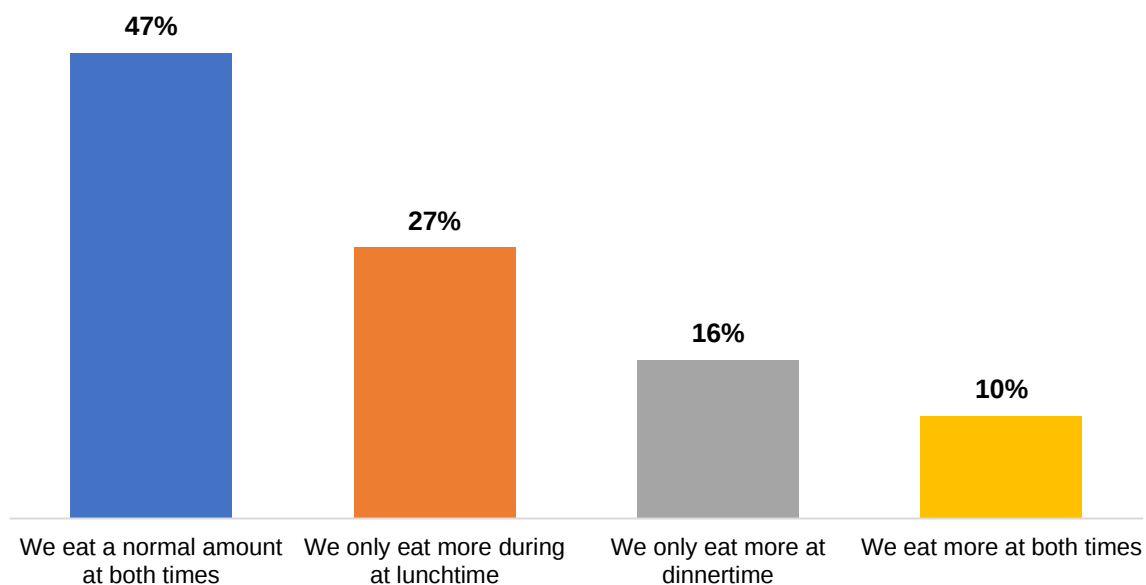


Source: Gallup Pakistan Survey, 2022

1.5. Trend Data

	1999	2000	2006	2008	2009	2010	2012	2013	2015	2016	2022
Roti/ Bread	79%	81%	67%	74%	65%	75%	69%	73%	48%	52%	70%
Rice	20%	18%	30%	24%	18%	25%	13%	27%	20%	18%	14%
Both	1%	-	-	-	17%	-	18%	0%	31%	30%	16%
DK/NR	-	1%	3%	2%	-	0%	0%	0%	1%	-	-

1.6. Question: Some people have heavy lunch or dinner or both. What do you have mostly?

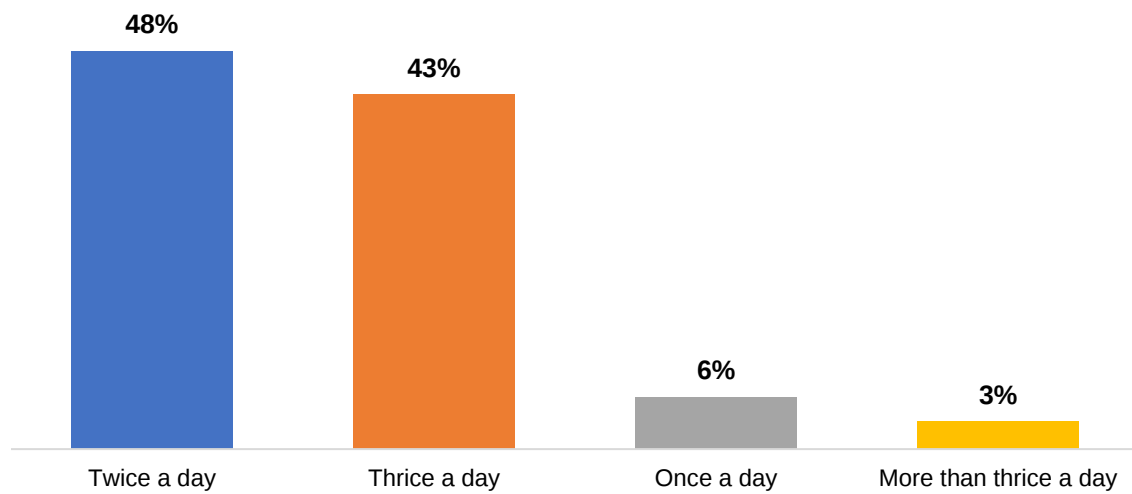


Source: Gallup Pakistan Survey, 2022

1.7. Trend Data

	2008	2013	2016	2022
We only eat more during at lunchtime	18%	21%	34%	27%
We only eat more at dinnertime	19%	15%	19%	16%
We eat more at both times	18%	40%	29%	10%
We eat a normal amount at both times	44%	24%	18%	47%
Don't Know / No Response	1%	0%	-	-

1.8. Question: How many meals do you have in a day?

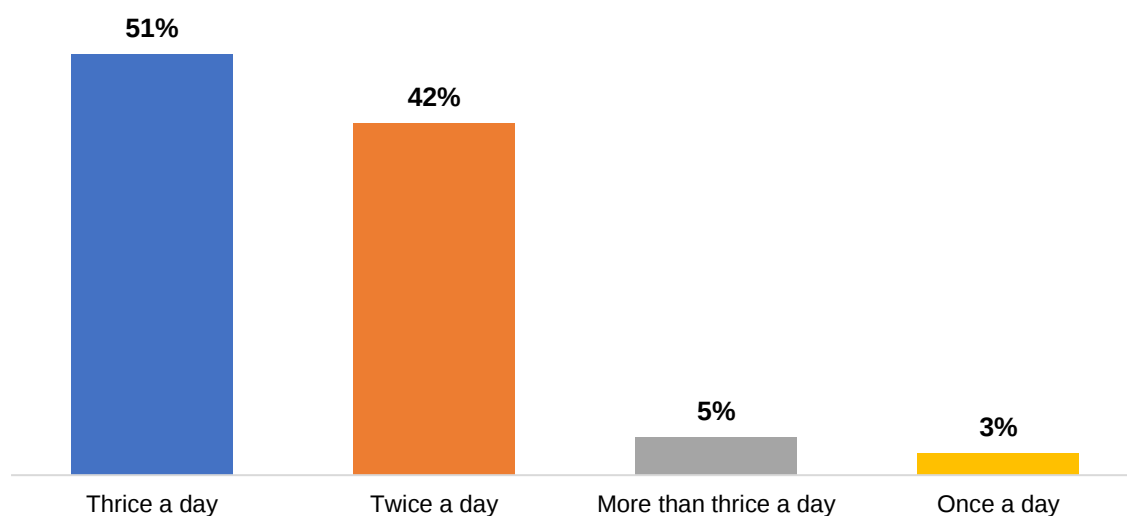


Source: Gallup Pakistan Survey, 2022

1.9. Trend Data

	2009	2013	2016	2022
Once a day	5%	8%	10%	6%
Twice a day	37%	43%	41%	48%
Thrice a day	52%	48%	43%	43%
More than thrice a day	5%	1%	6%	3%
Don't Know / No Response	1%	0%	-	-

1.10. Question: How many meals should be taken in your opinion, in a day?



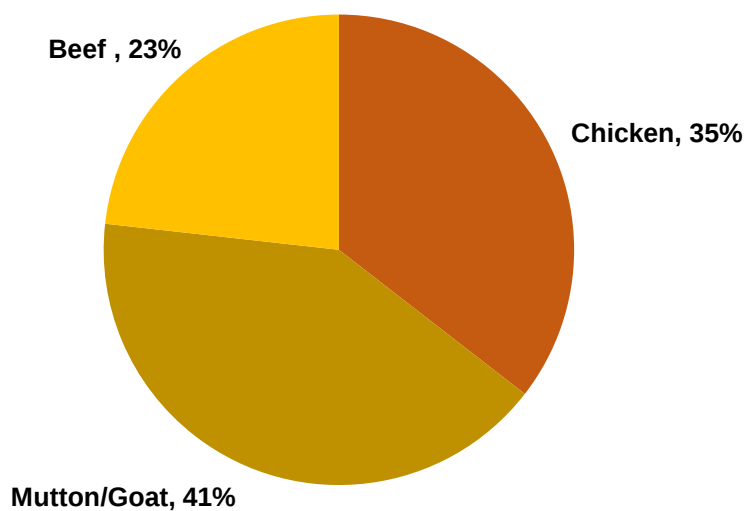
Source: Gallup Pakistan Survey, 2022

1.11. Trend Data

	2009	2013	2016	2022
Once a day	7%	7%	14%	3%
Twice a day	33%	38%	39%	42%
Thrice a day	55%	52%	43%	51%
More than thrice a day	4%	3%	4%	5%
Don't Know / No Response	1%	0%	-	-

MEAT CONSUMPTION

1.12. Question: What type of meat do you personally like the most?

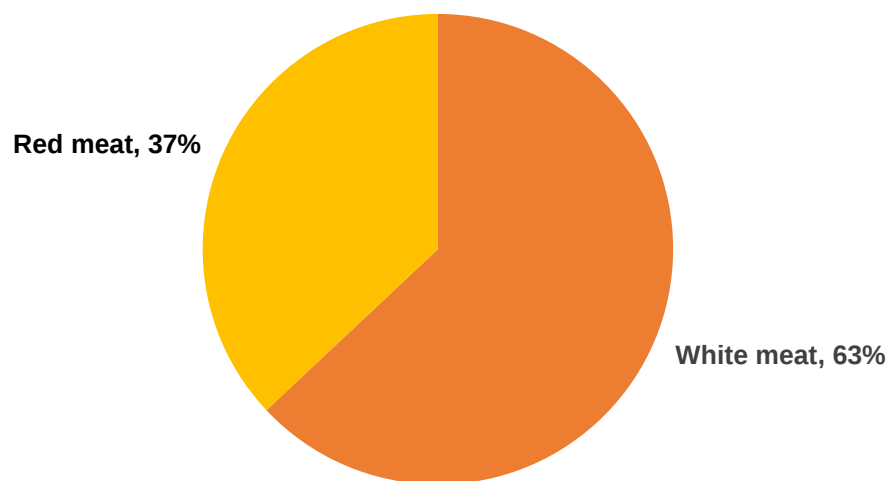


Source: Gallup Pakistan Survey, 2022

1.13. Trend Data

	1999	2003	2005	2006	2007	2008	2010	2012	2015	2016	2022
Chicken	29%	18%	25%	32%	36%	27%	33%	20%	48%	44%	35%
Mutton	20%	39%	30%	41%	25%	36%	31%	38%	20%	25%	41%
Beef	49%	43%	45%	27%	39%	36%	34%	34%	31%	30%	23%
Don't Know / No Response	2%	-	-	-	0%	1%	2%	8%	1%	1%	-

1.14. Question: What type of meat is mostly used in your household?

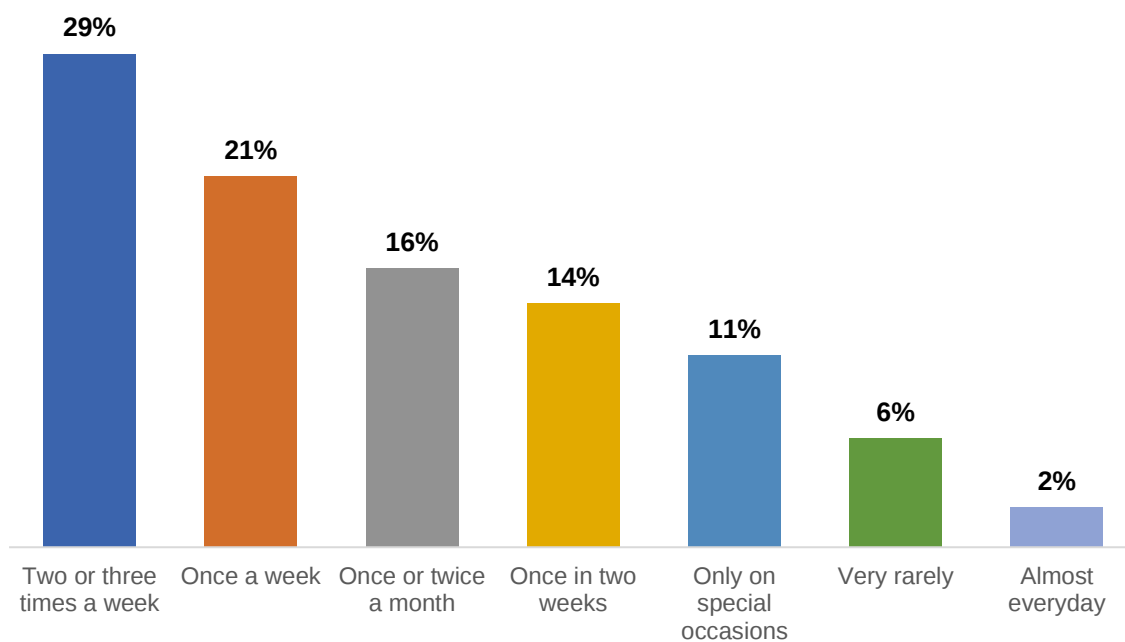


Source: Gallup Pakistan Survey, 2022

1.15. Trend Data

	2005	2007	2008	2016	2022
White meat	41%	47%	39%	61%	63%
Red meat	59%	53%	60%	38%	37%
Don't Know / No Response	-	-	1%	1%	-

1.16. Question: How often is meat eaten in your household?



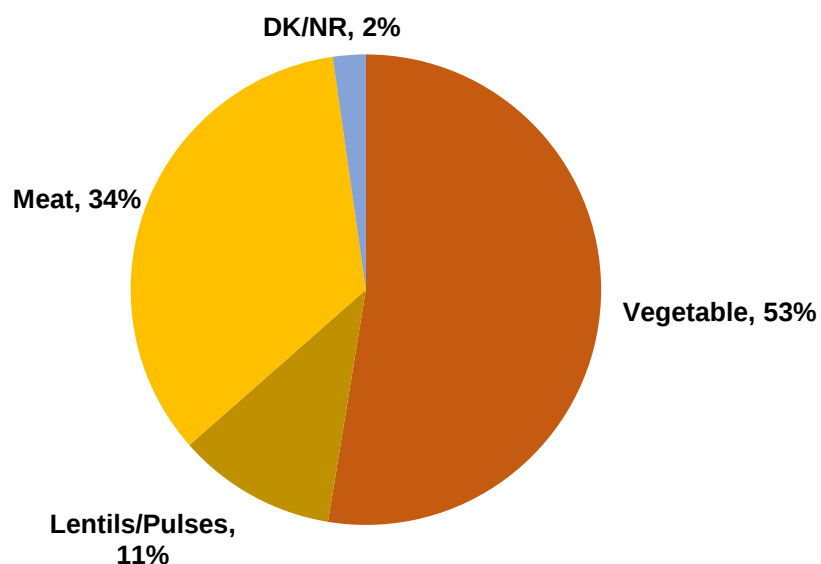
Source: Gallup Pakistan Survey, 2022

1.17. Trend Data

	2008	2009	2012	2013	2016	2022
Almost everyday	9%	9%	6%	8%	6%	2%
Two or three times a week	31%	41%	33%	34%	41%	29%
Once a week	24%	24%	43%	28%	26%	21%
Once in two weeks	14%	14%	11%	15%	12%	14%
Once or twice a month	12%	7%	4%	6%	9%	16%
Very rarely	5%	3%	3%	4%	2%	6%
Only on special occasions	3%	3%	-	5%	3%	11%
Don't Know / No Response	2%	-	0%	0%	1%	-

PREFERENCE FOR FOOD COMPONENTS

1.18. Question: If the price of all the three food items is equal, what would you prefer in your diet?

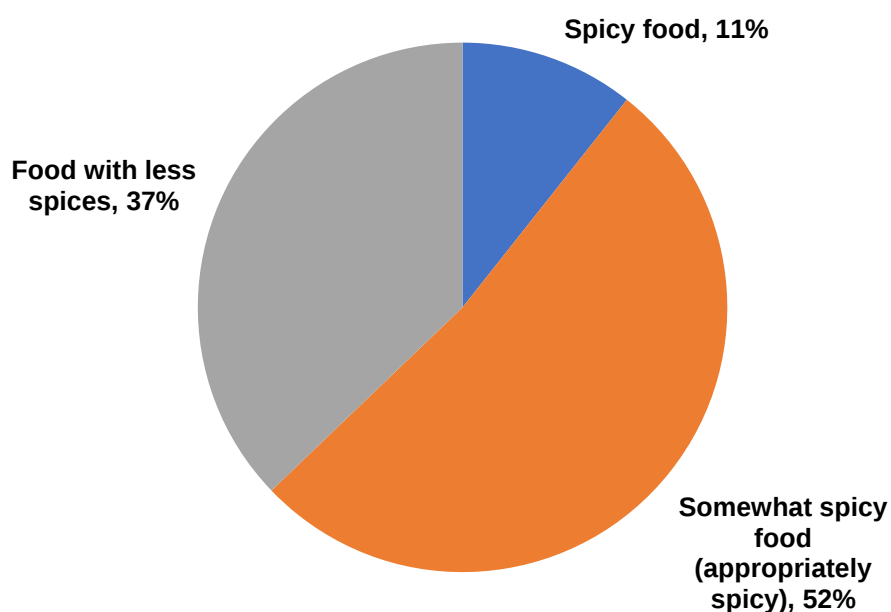


Source: Gallup Pakistan Survey, 2022

1.19. Trend Data

	2005	2009	2016	2022
Vegetable	44%	32%	47%	53%
Lentils/Pulses	12%	15%	14%	11%
Meat	44%	51%	38%	34%
Don't Know / No Response	-	2%	1%	2%

1.20. Question: Some people like hot and spicy food, others like fewer spices. What kind of food do you like?



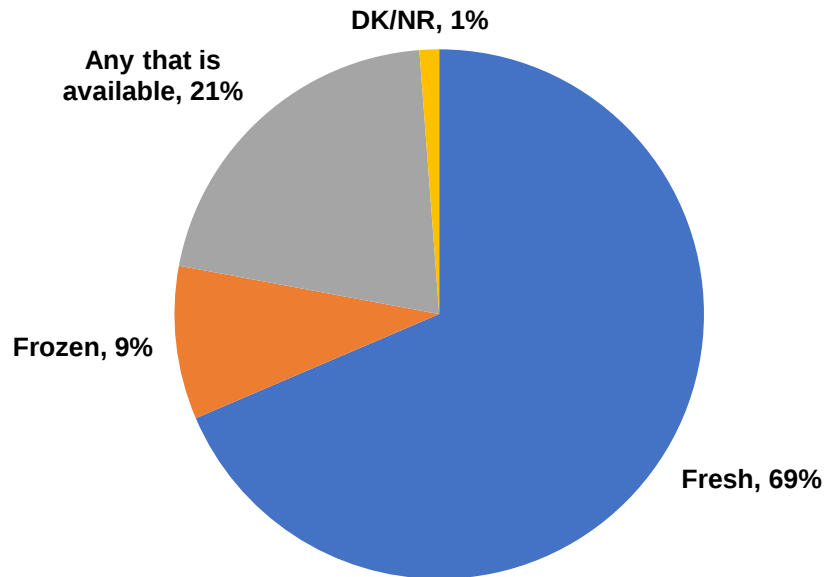
Source: Gallup Pakistan Survey, 2022

1.21. Trend Data

	2009	2013	2016	2022
Spicy food	23%	14%	22%	11%
Somewhat spicy food (appropriately spicy)	50%	56%	52%	52%
Food with less spices	26%	29%	26%	37%
Don't Know / No Response	1%	-	-	-

IDEAS ABOUT FROZEN FOOD

1.22. Question: Do you buy fresh meat from butcher's shop or do you buy frozen meat?

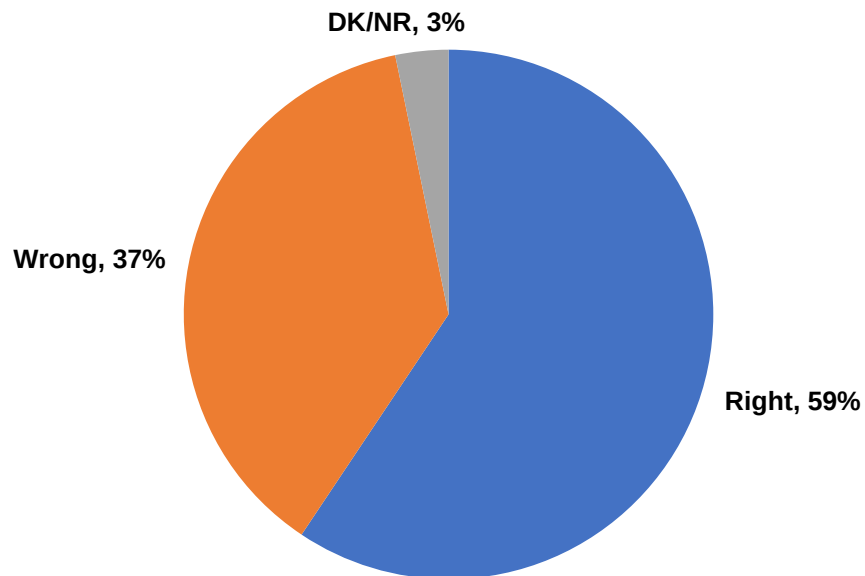


Source: Gallup Pakistan Survey, 2022

1.23. Trend Data

	2006	2007	2011	2016	2022
Fresh	81%	81%	68%	59%	69%
Frozen	11%	7%	8%	19%	9%
Any that is available	8%	12%	24%	21%	21%
Don't Know / No Response	-	-	-	1%	1%

1.24. Question: Some people believe it is not good to use frozen food and others consider it good. What is your view regarding frozen food?



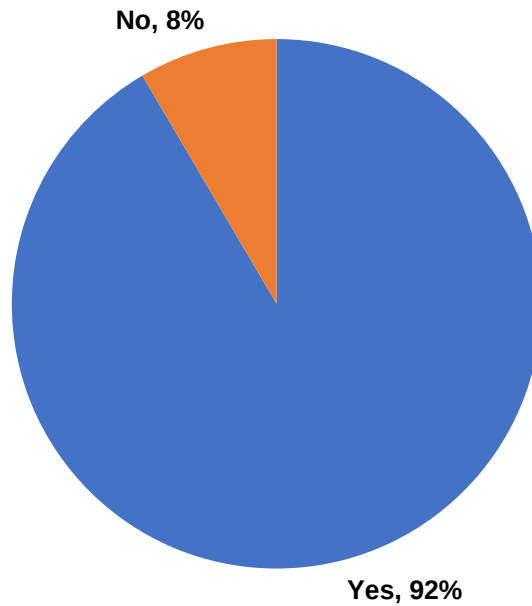
Source: Gallup Pakistan Survey, 2022

1.25. Trend Data

	2006	2007	2011	2016	2022
Right	42%	36%	37%	45%	59%
Wrong	47%	52%	48%	44%	37%
Don't Know / No Response	11%	12%	15%	11%	3%

TEA

1.26. Question: Do you take tea (sometimes/often)?

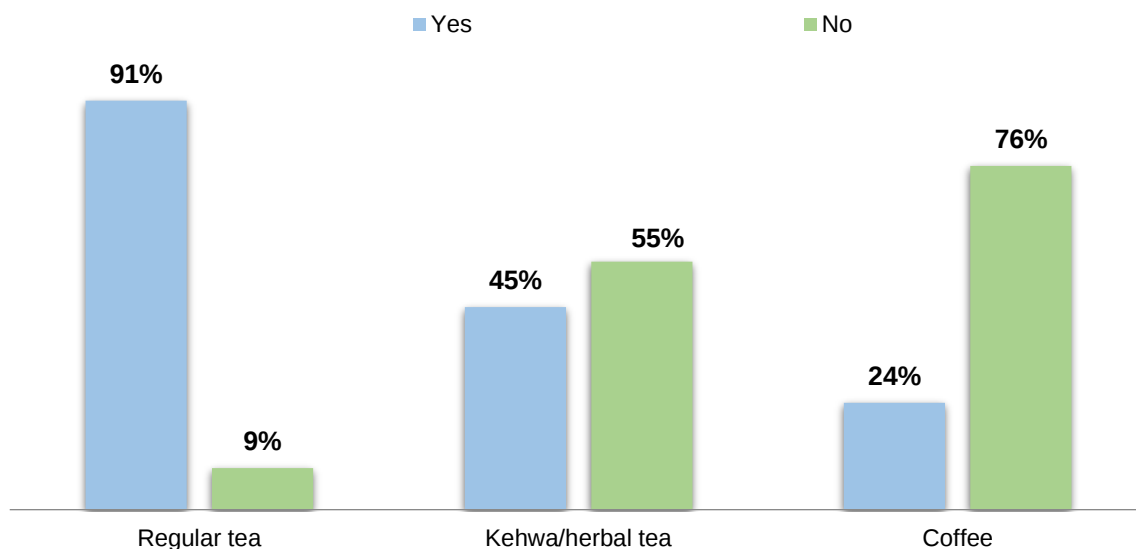


Source: Gallup Pakistan Survey, 2022

1.27. Trend Data

	2009	2016	2022
Yes	77%	84%	92%
No	20%	15%	8%
Don't Know / No Response	3%	1%	-

1.28. Question: What is used in your household?

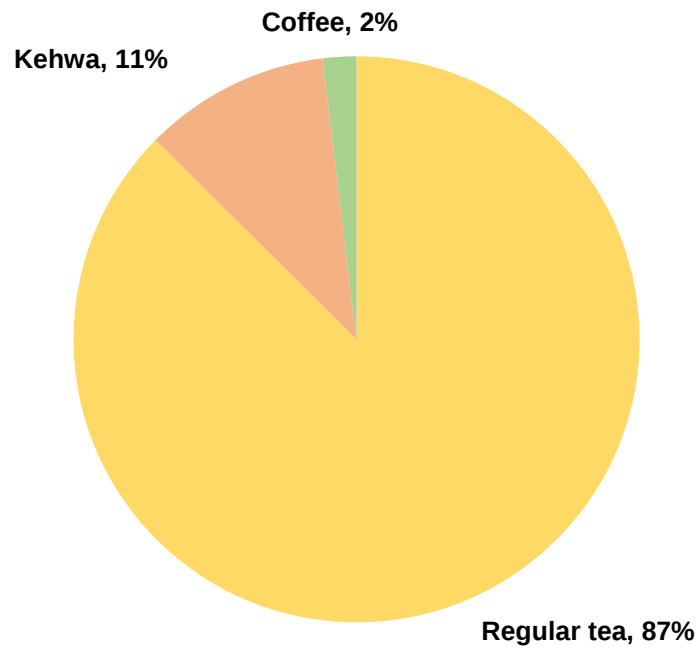


Source: Gallup Pakistan Survey, 2022

1.29. Trend Data

	2005			2008			2009			2011			2016			2022		
	Yes	No	DK/NR	Yes	No	DK/NR	Yes	No	DK/NR	Yes	No	DK/NR	Yes	No	DK/NR	Yes	No	DK/NR
Regular tea	98%	2%	-	91%	7%	2%	96%	3%	-	98%	2%	-	96%	4%	-	91%	9%	-
Kehwa/herbal tea	18%	73%	9%	19%	69%	12%	23%	71%	6%	37%	61%	2%	31%	68%	2%	45%	55%	-
Coffee	5%	78%	17%	8%	80%	12%	10%	83%	7%	15%	78%	7%	22%	76%	2%	24%	76%	-

1.30. Question: Among tea and its kinds which one is used most often in your household?

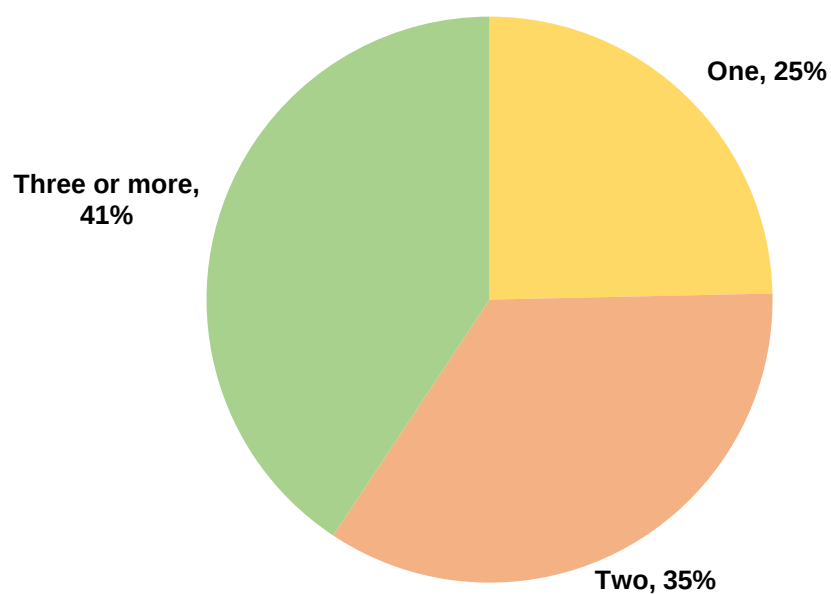


Source: Gallup Survey, 2022

1.31. Trend Data

	2005	2009	2016	2022
Regular tea	96%	94%	89%	87%
Kehwa	4%	4%	4%	11%
Coffee	-	2%	2%	2%
Don't Know / No Response	-	-	5%	-

1.32. Question: How many cups of tea do you take in a day?*



Source: Gallup Pakistan Survey, 2022

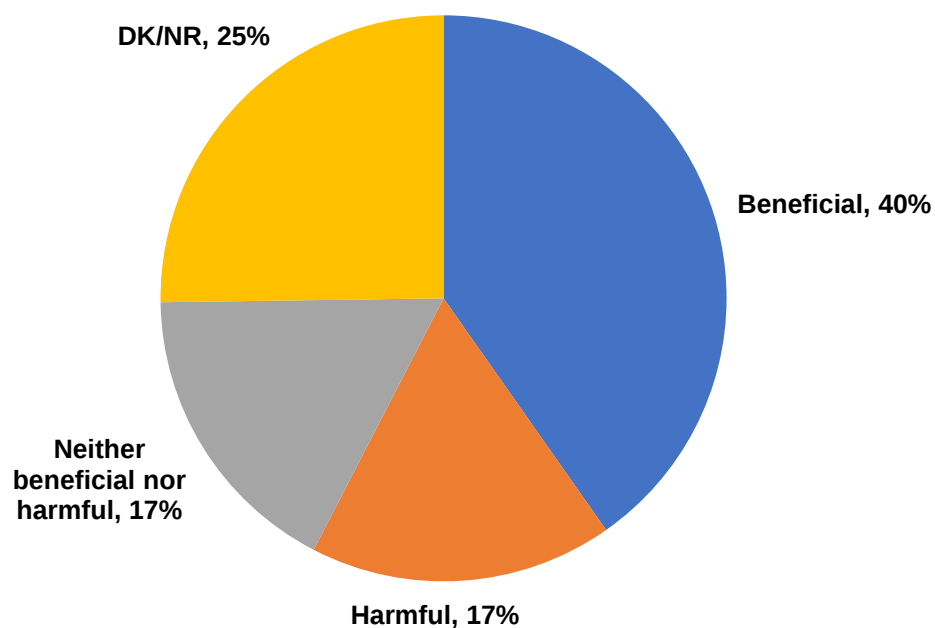
1.33. Trend Data

	2008	2009	2011	2016	2022
One	10%	12%	8%	25%	25%
Two	28%	46%	38%	42%	35%
Three or more	48%	39%	50%	31%	41%
Don't Know / No Response	14%	3%	4%	2%	-

**Only among those who say they drink tea.*

SALT CONSUMPTION

1.34. Question: In your view, is iodized salt beneficial or harmful for health?

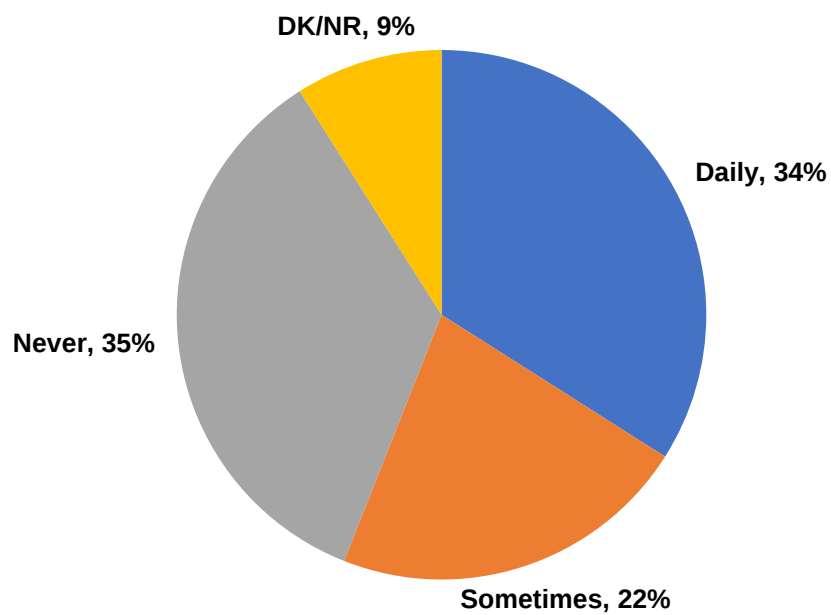


Source: Gallup Pakistan Survey, 2022

1.35. Trend Data

	2008	2016	2022
Beneficial	66%	50%	40%
Harmful	5%	14%	17%
Neither beneficial nor harmful	13%	24%	17%
Don't Know / No Response	16%	13%	25%

1.36. Question: Do you use iodized salt in your household?



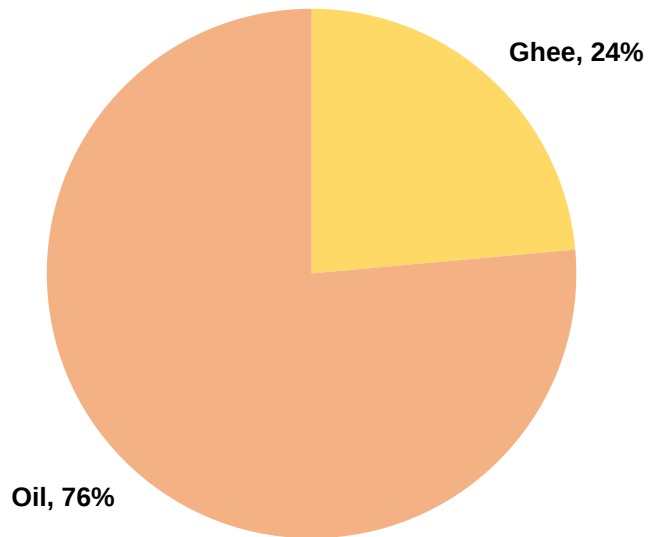
Source: Gallup Pakistan Survey, 2022

1.37. Trend Data

	2008	2016	2022
Daily	40%	34%	34%
Sometimes	36%	35%	22%
Never	23%	29%	35%
Don't Know / No Response	1%	2%	9%

OILY FOOD

1.38. Question: In your opinion, which one is better for health, oil or ghee?

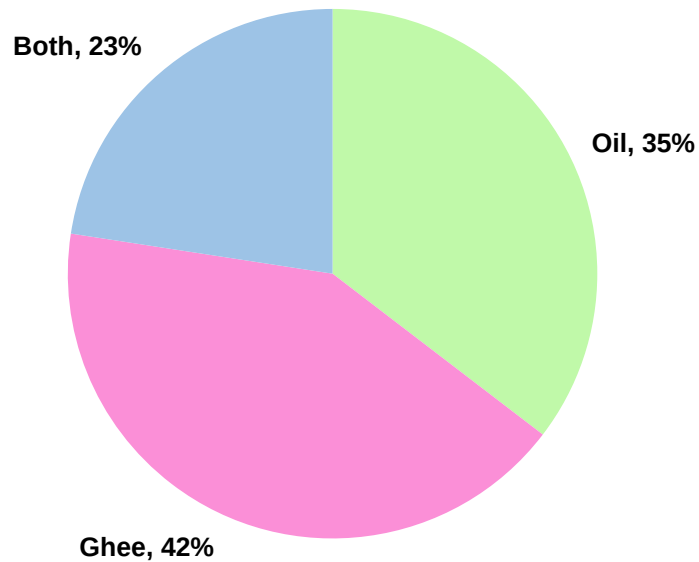


Source: Gallup Pakistan Survey, 2022

1.39. Trend Data

	2008	2016	2022
Ghee	31%	38%	24%
Oil	61%	61%	76%
Don't Know / No Response	8%	1%	-

1.40. Question: What is used for cooking food in your household?



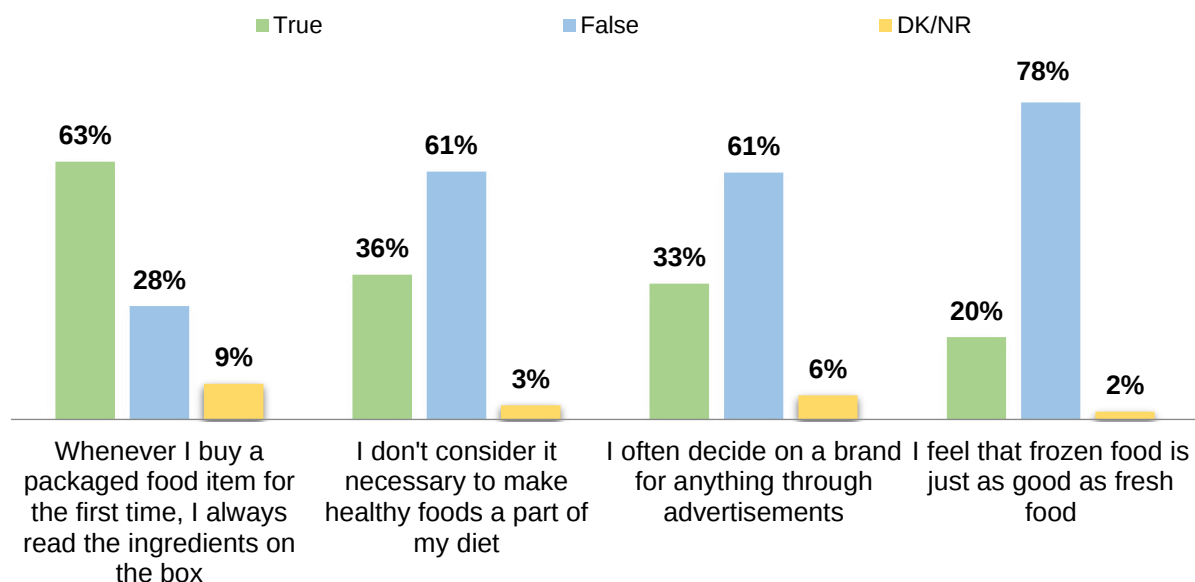
Source: Gallup Pakistan Survey, 2022

1.41. Trend Data

	2000	2009	2016	2022
Oil	15%	45%	24%	35%
Ghee	41%	19%	40%	42%
Both	44%	33%	35%	23%
Don't Know / No Response	-	3%	1%	-

ATTITUDES TOWARDS DIET

1.42. Question: I will read a few statements, please tell me whether you agree or disagree with each of the following?



Source: Gallup Pakistan Survey, 2022

1.43. Trend Data

	2004		2008		2009		2016		2022		
	True	False	True	False	True	False	True	False	True	False	DK/NR
Whenever I buy a packaged food item for the first time, I always read the ingredients on the box	54%	46%	66%	34%	65%	35%	63%	37%	63%	28%	9%
I don't consider it necessary to make healthy foods a part of my diet	54%	46%	49%	51%	45%	55%	33%	67%	36%	61%	3%
I often decide on a brand for anything through advertisements	35%	65%	50%	50%	47%	53%	38%	62%	33%	61%	6%
I feel that frozen food is just as good as fresh food	35%	65%	31%	69%	40%	60%	42%	58%	20%	78%	2%

GALLUP PAKISTAN PUBLIC HEALTH PROGRAM

Gallup Pakistan formally introduced the Gallup Pakistan Public Health Program earlier this year. Through this dedicated space, we hope to act as catalysts of change in the public health landscape by using innovative and collaborative solutions to tackle complex problems in the country.

Under this program, the streams of work currently include:

1. Let's Talk Public Health
2. Gallup Pakistan and CDC Sponsored Projects: Recent developments include the Cause of Death (COD) Training and Enhancing Integrated Mortality Surveillance Workshop held in Islamabad from February 6 – February 10, 2023
3. Gallup Pakistan and Digital Vaccine Register Project
4. Gallup Big Data Analysis of Pakistan Statistical Yearbook – Healthcare in Pakistan (2010 – 2020)
5. Gallup Big Data Analysis of Pakistan Statistical Yearbook – Live Births (2018 – 2020) – Pakistan Demographic Survey 2020
6. Gallup Pakistan 40-year report on Health

One of our pioneering initiatives as part of the Public Health Program is the **“Let's Talk Public Health”** series which was launched in March 2022. Through this platform, we conduct insightful conversations with experts/researchers/practitioners in the field, on public health challenges that Pakistan is facing today and we hope we can find ways to reimagine the concept of health as well as make meaningful contributions to the public health discourse in both, Pakistan and globally.

Links to our previous episodes can be accessed below:

- *Episode 1: Lifestyle and Non-communicable diseases (NCDs) – Conceptual, Empirical and Practical Perspective by Dr. Ijaz Gilani.* <https://youtu.be/uJcYQlj3GH4>
- *Episode 2: Pakistan's Healthcare Market, Medical Devices and Digital Health by Hammad Ijaz.* <https://youtu.be/Wz8QWExlHGg>
- *Episode 3: Health Perception Survey - WiN International and Gallup Pakistan by Mishalle Kayani and Laila Waqar.* <https://youtu.be/IFQp6Qp6GrQ>
- *Episode 4: Value of Community Co-design for Vaccine Confidence Interventions - A Case from Karachi by Rubina Qasim.:* <https://youtu.be/7TqjL3cM17A>
- *Episode 5: Science Behind Artistic Processes (Conductive Tools for Health Sector) by Dr. Habib Afsar.* <https://www.youtube.com/watch?v=1ZWK0EhZyD8>
- *Episode 6: Family Planning in Pakistan: Issues, Progress and the Way Forward by Dr. Adnan Khan.* <https://youtu.be/LyQfFv0w8oA>
- *Episode 7: The Menace of Self-Citation: An Audit of Two Years from Journals of KPK by Dr. Umema Zafar.* <https://youtu.be/UZrCBreD8No>
- *Episode 8: International Health Regulations (IHRs) and Pakistan by Dr. Saeed Ahmad.* <https://www.youtube.com/watch?v=t9sZOnzfiS8&t=64s>
- *Episode 9: Migration and Health by Dr. Roomi Aziz.* <https://www.youtube.com/watch?v=E89KBuiU52E>
- ***Episode 10: Dispelling Development Myths: The Power of Community Engagement by Dr. Ayesha Khan.*** <https://www.youtube.com/watch?v=WtFXmrnazzc>

In our 10th episode, we were introduced to the impactful community-oriented work done by the Akhter Hameed Khan Foundation through the Urban Impact Lab. The Urban Impact Lab was formed 5 years ago and serves a community of 300,000 individuals where through mobilization efforts, there have been notable changes observed in population health, the most

significant being a 13% increase in the contraceptive prevalence rate (CPR). In this episode, Dr. Ayesha brilliantly walked us through the inception of AHKF, some meaningful contributions to poverty reduction through community-based projects such as the Orangi Pilot Program and the Rural Support Program and discussed the challenges in the development field in Pakistan.

In addition to our talk series, we've worked on several **research projects with the Centers for Disease Control (CDC).**⁴

Project: Survey of Social and Behavioral Determinants of COVID-19 Vaccination Uptake and Evaluation of On-going National and Subnational Programming to Increase Demand for COVID-19 Vaccines. 2021

Description: The project aimed to prepare for the rollout of COVID-19 vaccines by assessing social and behavioral determinants for under vaccination in the EMRO region. The multi-country assessment focused on understanding determinants of demand for COVID-19 and other vaccines among priority populations, particularly the role of rumors and misinformation on behavior, and a secondary focus on challenges in vaccine service delivery faced by healthcare workers and program administrators. This project also evaluated ongoing regional, country-level, and subnational planning efforts to introduce COVID-19 vaccines to high priority populations of healthcare workers, adults over 65, and high-risk adults. An important aspect of this project was data triangulation- collecting and reviewing diverse sources of data to compare, contrast, and develop a fuller picture of demand for COVID-19 vaccines in each selected country.

Project: A Cross-Sectional Survey on COVID-19 Knowledge, Attitudes, Practices (KAP) and Resiliency in Pakistan. 2021-2022

Description: The goal of this study was to provide a nationally and regionally representative comprehensive understanding of knowledge, attitudes, and practices (KAPs) around COVID-19 as well as the mental health impacts and other personal effects of the pandemic by providing context specific evidence to help address COVID-19 more effectively. Measuring key cognitive and behavioral factors associated with COVID-19 will help inform recommendations for effective public health management of the disease, such as behavior change strategies, communication strategies to counteract misperceptions around COVID-19, address stigma, community and home-care strategies, and the deployment of food or cash assistance, to vulnerable households.

Project: Track and Trace of COVID-19 Suspected Cases – Pilot Program Working with Faith-Based Organizations. 2022

Description: Engaging faith communities to advance COVID-19 risk communication and mitigation represents a pivotal opportunity to accelerate pandemic control. The project goal was to pilot a program in which contact tracing and advocacy around non-pharmaceutical intervention (NPIs) is done by FBO's and lessons can be learned and shared with policy-makers dealing with COVID-19.

Project: Estimating Excess Deaths and Improving Mortality Surveillance and Civil Registration Systems in Pakistan during COVID-19. 2022-2023

Description: This project aims to estimate and improve the capacity for estimation of excess deaths and their causes in selected areas of Pakistan; understand and inform as to causes of increases in preventable deaths; and to attempt to integrate relevant partners and systems to build sustainable capacity in mortality surveillance and in National Public Health Institutes.

⁴ Funding for this conference was made possible (in part) by the Centers for Disease Control and Prevention. The views expressed in written conference materials or publications and by speakers and moderators do not necessarily reflect the official policies of the Department of Health and Human Services, nor does the mention of trade names, commercial practices, or organizations imply endorsement by the U.S. Government.

Cause of Death (COD) Training (Monday, February 6 to Wednesday February 8, 2023)

Over the course of 3-days, health stakeholders such as doctors from public and private hospitals, the district health office (DHO), Ministry of Health (MoH) and the Civil Registration and Vital Statistics Unit (CRVS) in Islamabad, participated in a training module led by the Centers for Disease Control and Prevention (CDC-US) with Gallup Pakistan's support. The technical training focused on assigning cause of death, the use of ICD-10/11 coding for maternal mortality (MM) and perinatal mortality (PM), and birth and death record assessment and management. Participants also took part in practical exercises using digital platforms like DORIS and AnaCOD as well as group case studies to appropriately fill out death registration forms and discuss mortality management with respect to participants' institutions.

Enhancing Integrated Mortality Surveillance Workshop (Thursday, February 9 to Friday, February 10, 2023)

On February 9 and 10, 2023, Gallup Pakistan and the Ministry of National Health Services and Coordination held a workshop in Islamabad to discuss potential ways to strengthen mortality surveillance in Pakistan. Participants included doctors from public and private hospitals in Islamabad, development organizations and other key actors involved in health surveillance and management systems in Pakistan. Participants had the chance to learn from insightful presentations on existing health infrastructure which included detailed information on data collection processes. In addition to this, participants also actively engaged in group exercises which involved the identification of problems as well as solutions to problems in current surveillance systems at different levels of implementation ranging from the community level up to the facility and institutional levels.

Lastly, during this year we also worked on a ***Digital Vaccine Register Project***, the details of which, you can find below:

The ***Zindagi Mehfooz (ZM)*** application has been designed as a digital repository of enrolment and vaccination records of women and children on a web-based dashboard, currently being leveraged as a micro-data collection tool in the health centers of Sindh, Pakistan. The scope of the research study was to evaluate the impact of the application on immunization service delivery, registry coverage, uptake of immunization services, and data use patterns.

The qualitative aspect of the evaluation included a series of focus group discussions, key informant interviews, and observations across health facilities/offices in the districts of Jacobabad, Shikarpur, and Naushahro Feroz with the goal of understanding the perceptions of all the stakeholders involved (ZM staff, caregivers, vaccinators, supervisors/coordinators, district managers, and provincial managers) regarding the use and impacts of the ZM application.

Gallup Big Data Analysis of Pakistan Statistical Yearbook – Healthcare in Pakistan (2010 – 2020) <https://gallup.com.pk/wp/wp-content/uploads/2022/12/Health-pr.pdf>

As a developing country, Pakistan has been struggling with developments in the health sector. Even though there has been constant development happening, the country still has a long way to go. Undertaking an analysis of facts and figures available in The Pakistan Statistical Yearbook 2022 published by the Pakistan Bureau of Statistics, we provide an overview of the growth in the health sector over the last decade.

Key Findings:

- (1). The number of health institutions in Pakistan increased by 10% from 2011 to 2020.

- (2). Almost 37% increase in the number of beds was seen in health institutions from 2011 to 2020.
- (3). 61% increase in the number of doctors as compared to 135% increase the number of dentists in the country from 2011 to 2020.
- (4). 69% increase in lady health visitors, 50% increase in the number of nurses and 40% increase in the number of midwives was seen in the previous decade.

Gallup Big Data Analysis of Pakistan Statistical Yearbook – Live Births (2018 – 2020) – Pakistan Demographic Survey 2020

This series aims to present the important learnings from the Pakistan Demographic Survey 2020 for policy makers, the public, as well as for marketers in an easy and understandable way. In particular, this edition looks at number of Live Births from 2018 to 2020. The total number of live births over a period of time can have implications for state of healthcare across the urban-rural divide, and between provinces, and the age stratification can tell us what age group of women are having the greatest successful pregnancies. The series' main aim is to provide data. Implications of these data points for development sector as well as wider socio-political ramifications is something we would like to trigger in relevant circles.

Key Findings:

- (1). Number of live births by age of mother: During 2018-20, women in their late twenties delivered the highest number of live babies, at 31% of the total number of live births.
- (2). Number of live births by place of delivery and age of mother: Nearly 1 in 4 Pakistani children (24%) were born at home between 2018 and 2020. 65% of live births in Balochistan were homebirths (greatest proportion out of all provinces).
- (3). Number of live births by type of attendant at birth and age of mother: Between 2018-20, 60% of children born in Pakistan were delivered by doctors. 16% were delivered by traditional birth attendants (Dai) and 12% by nurses. Out of live births conducted under a doctor's overview, 60% took place in rural areas while 40% were in urban areas.

In addition to all the aforementioned initiatives, Gallup Pakistan is also working on producing a **40-year report on Health in Pakistan** which is a compilation of findings from health research conducted by the organization over the last 4 decades.

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