BOURNEMOUTH UNIVERSITY

Canterbury Christ Church University

Loughborough University

TANGERINE

Project Summary

nuTritional heAlth aNd aGeing in oldER ethnIc miNoritiEs



UKRI Medical Research Council

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Introduction

TANGERINE Project aim

To work together with older South Asian, Black African, and Caribbean communities in the UK to develop sustainable and culturally inclusive food solutions that promote both better nutrition and healthy ageing.

Why this project matters

Many older adults from ethnic minority communities face higher risks of type 2 diabetes and heart disease, often linked to poor nutrition.

Current dietary advice is not always culturally inclusive, and barriers like low income, limited access to fresh food, and language barriers make healthy eating harder.

The *TANGERINE* Project worked with communities to develop better solutions for healthy ageing.

Acknowledgements

We gratefully acknowledge the Medical Research Council for funding this project (MR/Y010752/1).

We also thank our participants, stakeholders and the research team for their valuable time and contributions. Finally, we extend our gratitude to our project partners and Burnage Buddies for co-delivering this work, which could not be achieved without their support.

This research has been conducted using UK Biobank Resource under application number 124324 and UK Data Service project number 251326.

Project partners

Black Beetle Health is dedicated to promoting health, wellbeing and equality for LGBTQ+ Black and People of Colour.

BPC Indian Community's vision is to build a lively, inclusive community that honours Indian culture, strengthens connections, and enhances lives through music, social activities, and cultural preservation.

The Caribbean and African Health Network's vision is to end health inequalities and wider disparities for Caribbean and African people in a generation.

Upturn's mission is to unlock the potential and improve the lives and the health and wellbeing of people from diverse groups and disadvantaged communities.

Co-production



- Pre-existing relationships with community organisations enabled community engagement
- Two-way communication and experience transfer
- Training and upskilling of community members to conduct research
- Continued commitment to work together past the end of the project

Co-production: Project partners' perspectives

"Working on the Tangerine Project was both a privilege and deeply enriching experience. The opportunity to observe how older African adults navigate food choices was inspiring. Through coproduction, the research highlighted the power influences that have shaped pan-African food culture over many generations. While speaking truth to the food itself, it also extended to the history, resilience, deep memories, and overall identity each meal carries, along with the importance of food in the everyday lives of African older persons."

– Jide Macaulay, Project Consultant for BBH

"From the community's perspective, this study made us feel included, respected, and valued. Having our cultural foods and experiences recognised in shaping a healthy ageing intervention was both meaningful and empowering. The collaborative approach helped build trust and ensured that the intervention reflected our cultural values, dietary practices, and lived experiences"

– Poonam Paranjpe, co-founder of BPC Indian Community

Co-production: Project partners' perspectives

CAHN
Caribbean & African Health Network

"Co-producing with TANGERINE reaffirmed the power of shared ownership, it transformed the project into something more meaningful, where everyone's perspective of healthy food shaped the outcome in a real and impactful way"

– Miriam Ejim, Caribbean and African Health Network

UPTURN

"Upturn Enterprise were delighted to work with the Universities involved in the TANGERINE project to develop and deliver on this important research. Their efforts to engage us and the participants through inclusive co-production approaches and stakeholder consultation were exemplary, whilst also building community research capacity through their involvement. These partnerships are ideally placed to deliver on the health agenda for minority and hard to reach communities and the impact of this work on our organisation supports our growth in this space"

– Anwar Ali OBE and Muzahid Khan DL MBE

National survey analysis

UK Biobank and Understanding Society are large UK studies that track people's health and daily lives to help researchers understand and improve wellbeing.

Fruit and vegetable intake*

- We found that compared to White British people, Pakistani and Caribbean people ate fewer vegetables even after accounting for socio-economic factors, while Indians ate more
- Differences in fruit intake were smaller and mostly linked to socio-economic factors
- Food insecurity was more prevalent in most minority groups (except Indians) and linked to reduced fruit and vegetable intake



National survey analysis

High-quality protein intake

- After accounting for socio-economic factors, African and Bangladeshi people were more likely, and Indian and Pakistani people less likely, than White people to consume high quality protein foods such as fish, meat, and dairy products



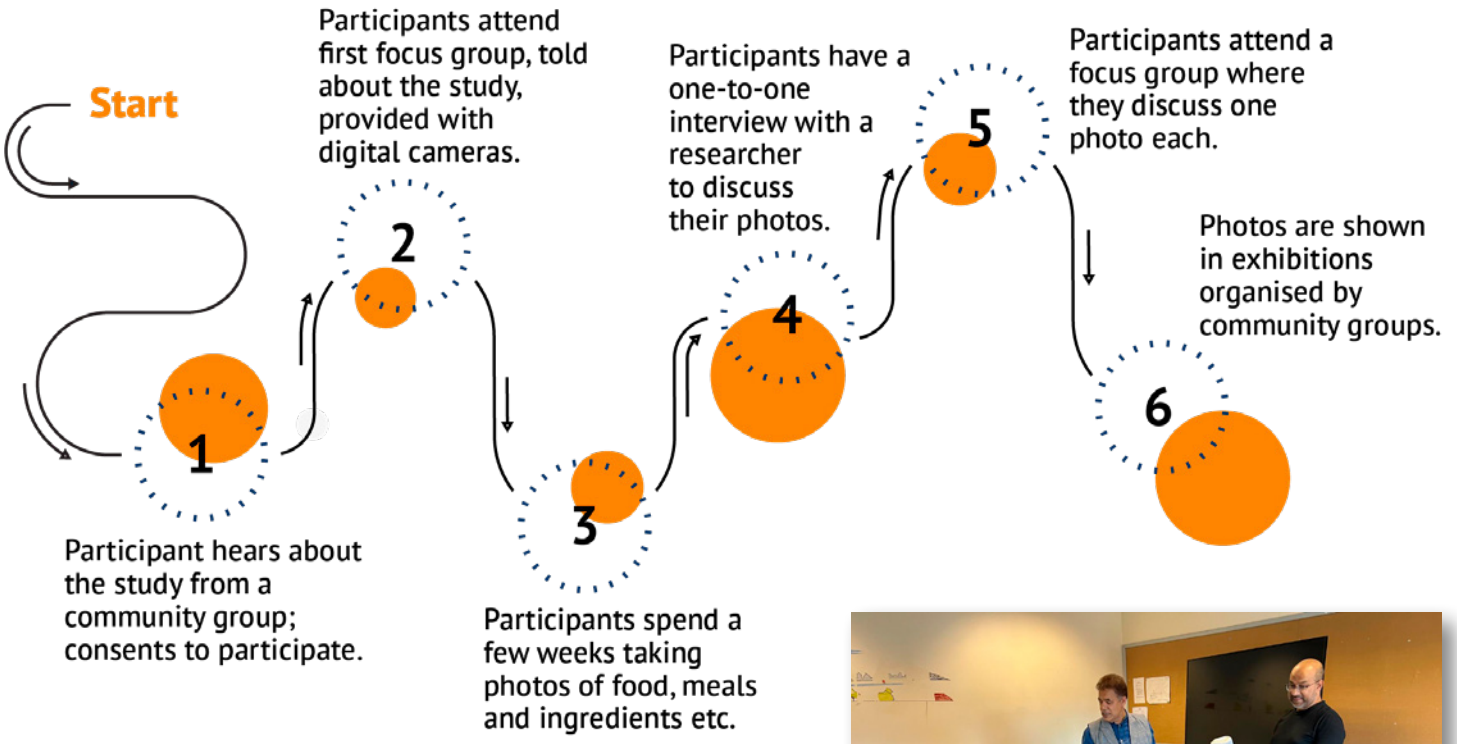
* Shah P, Demashkieh M, Ellahi B et al. (2025). Fruit and vegetable intake in minority ethnic groups in the UK: analysis from 'Understanding Society' and UK Biobank. Public Health Nutrition, 28(1), e159.

Photovoice study: Methods

All recruitment and data collection conducted through project partners.

Trust in community organisations fostered trust in the research study.





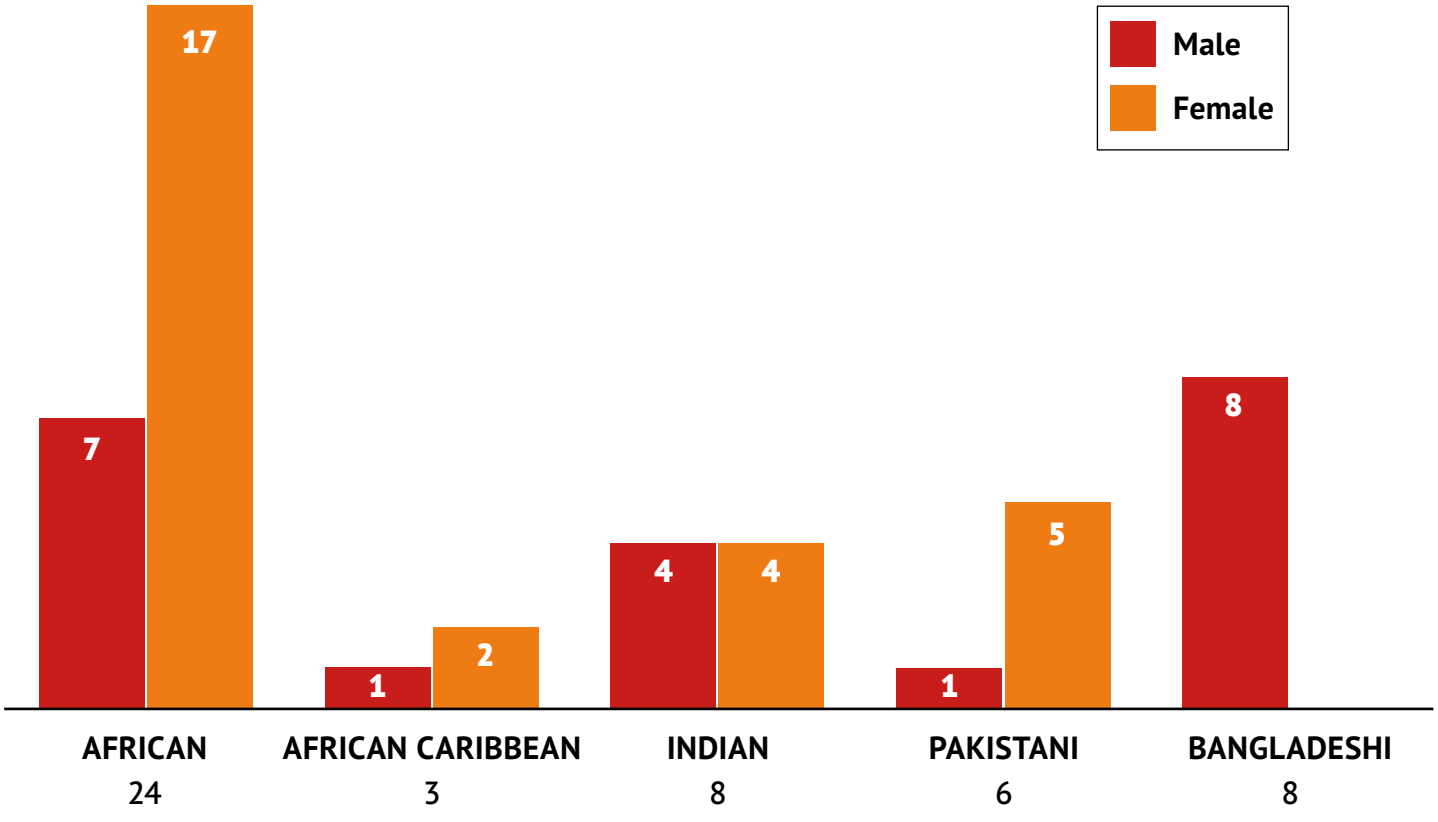


Photovoice study: Participants

- Total 49 participants – 21 men and 28 women



- Aged 60–83 years



Photovoice study: Feelings about research participation



"I was thinking, I'm taking this picture, I've been naughty eating this, I shouldn't have been eating this, I was more conscious. Otherwise, you know, you don't even think what you're eating."
– Pakistani woman, age 67 years.

"I thought, why are they investigating meals for African and Caribbean people? [P: Yeah] *Is it that they want to put poison in our food? That was my fear."*
– African Caribbean woman, age 62 years.

"The project partner made a big difference, she contacted me. If it was someone unknown, I wouldn't be interested."
– Indian man, age 64 years.

Photovoice study: Feelings about research participation

"When I see some research about health like you have to come under scrutiny I'm not going, I step back. This is the first time I am doing it and you guys made me feel relaxed. It was very educative, it's good to be involved in things like this." **– African woman, age 64 years.**

"We never thought before which food is good or bad, nor did we search for it. Now, after the research study, we can understand a little."
– Bangladeshi man, age 60 years.

Photovoice study: Overall summary

- Most preferred home-cooked, traditional foods
- Ethnic shops play an integral role in food accessibility and affordability for diverse communities
- Fruit and vegetables are eaten almost daily
- A health diagnosis was often a driver of dietary change

> *"I always want to prepare my own traditional food, that's when I feel like I've eaten. But, to go and buy a sandwich it's just like, I don't feel like I'm eating."*
> **– African Man, age 74 years.**



Photovoice study: Overall summary











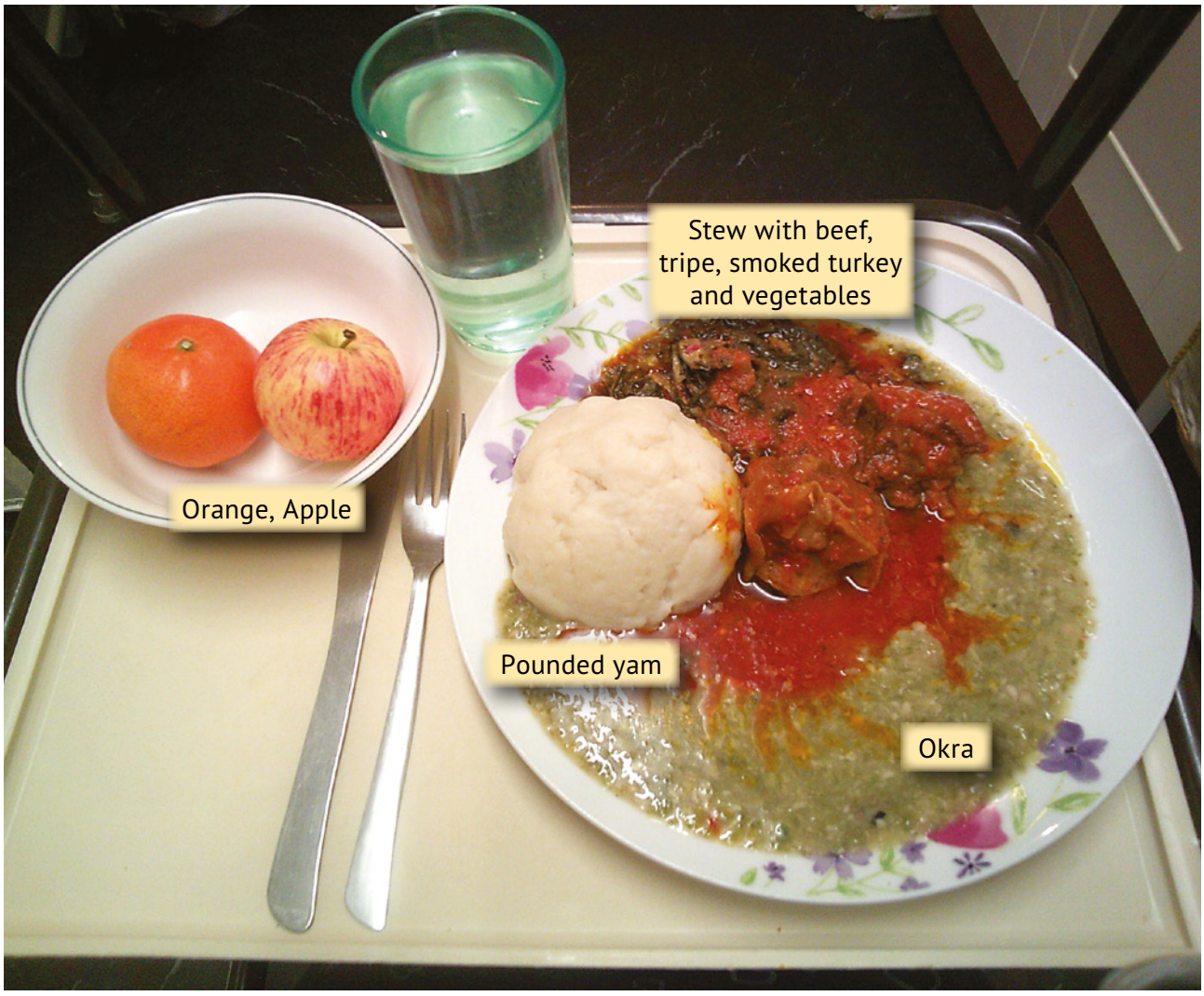




Photovoice study: Findings by community

African Community

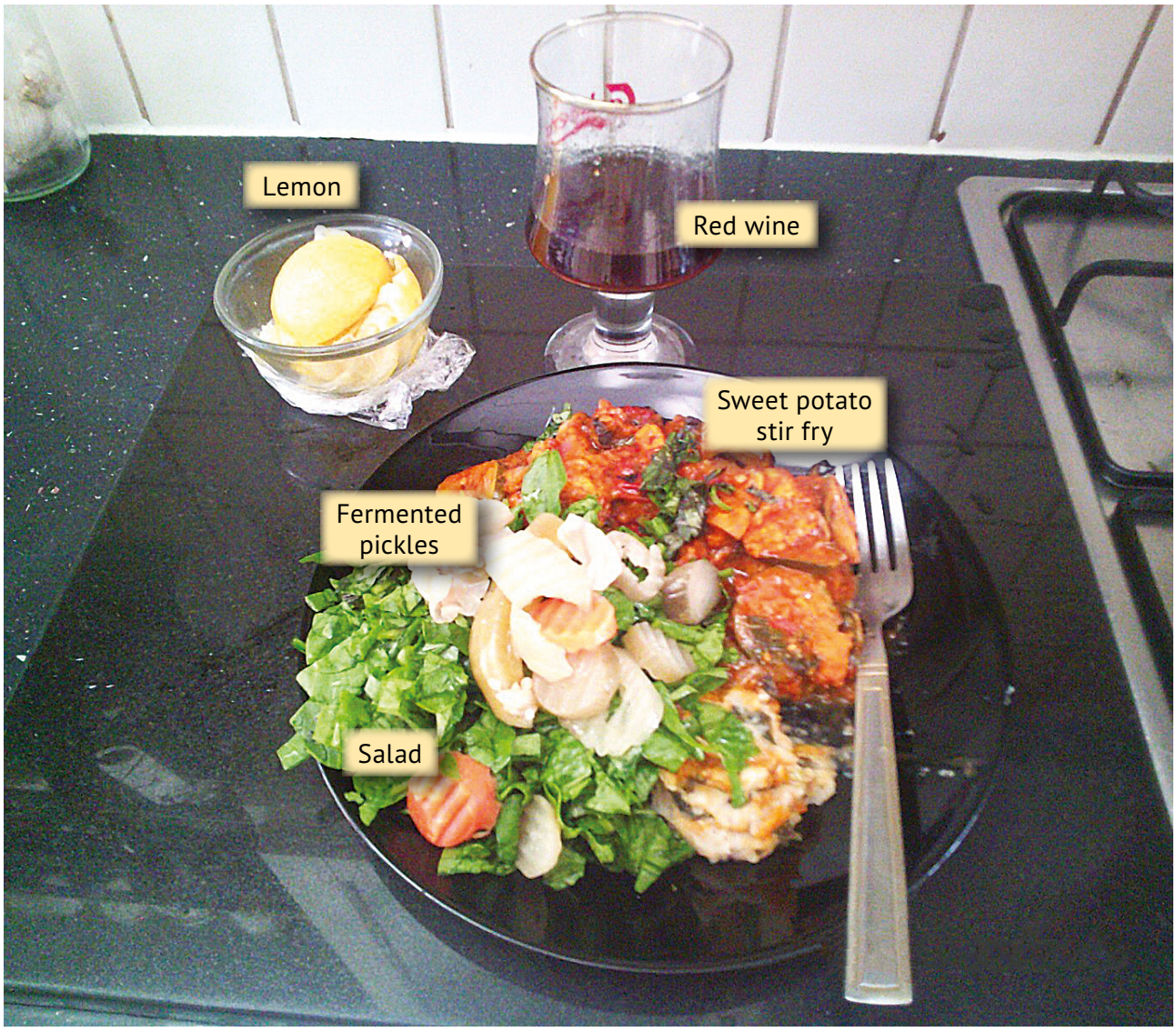
- Many cooked large meals and portioned food for later eating or freezing
- Functional and sensory changes shaped the textures and portions of meals consumed in later life
- Vegetables and proteins were often cooked together for a long time
- People ate fewer raw vegetables and salad



Photovoice study: Findings by community

Caribbean Community

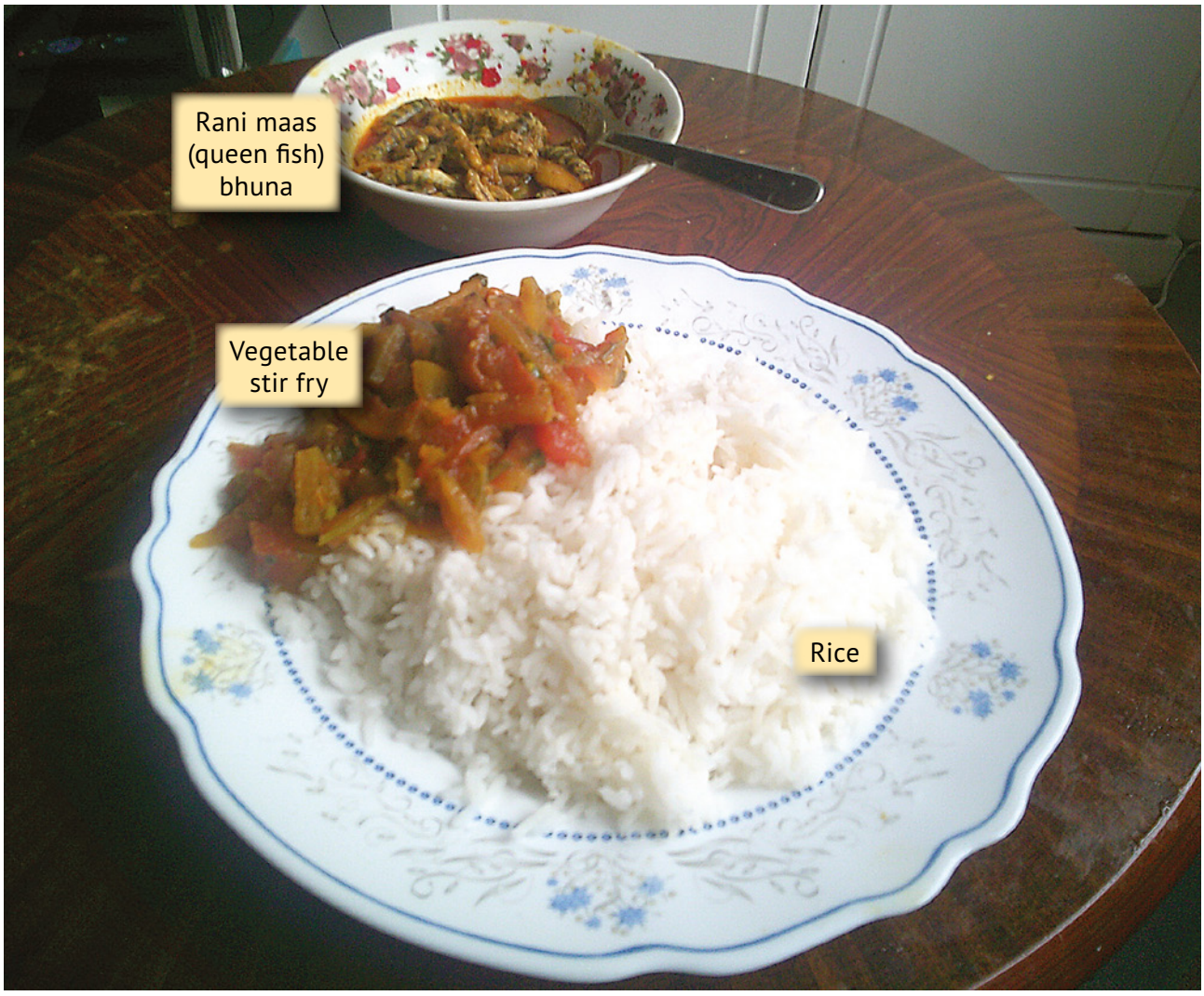
- Many ate a more British-influenced rather than traditional diet
- Shorter meal cooking times were common, and fresh vegetables and fruit were prevalent
- Participants described how traditional Caribbean foods were often fried, or high in sugar



Photovoice study: Findings by community

Bangladeshi Community

- Rice was the main carbohydrate source, followed by wheat in the form of parathas or roti
- Fish was the main source of protein and included variety of imported white and oily fish from Bangladesh. Red meat was also consumed
- People ate less salads and fresh vegetables but included cooked vegetables in meals



Photovoice study: Findings by community

Indian Community

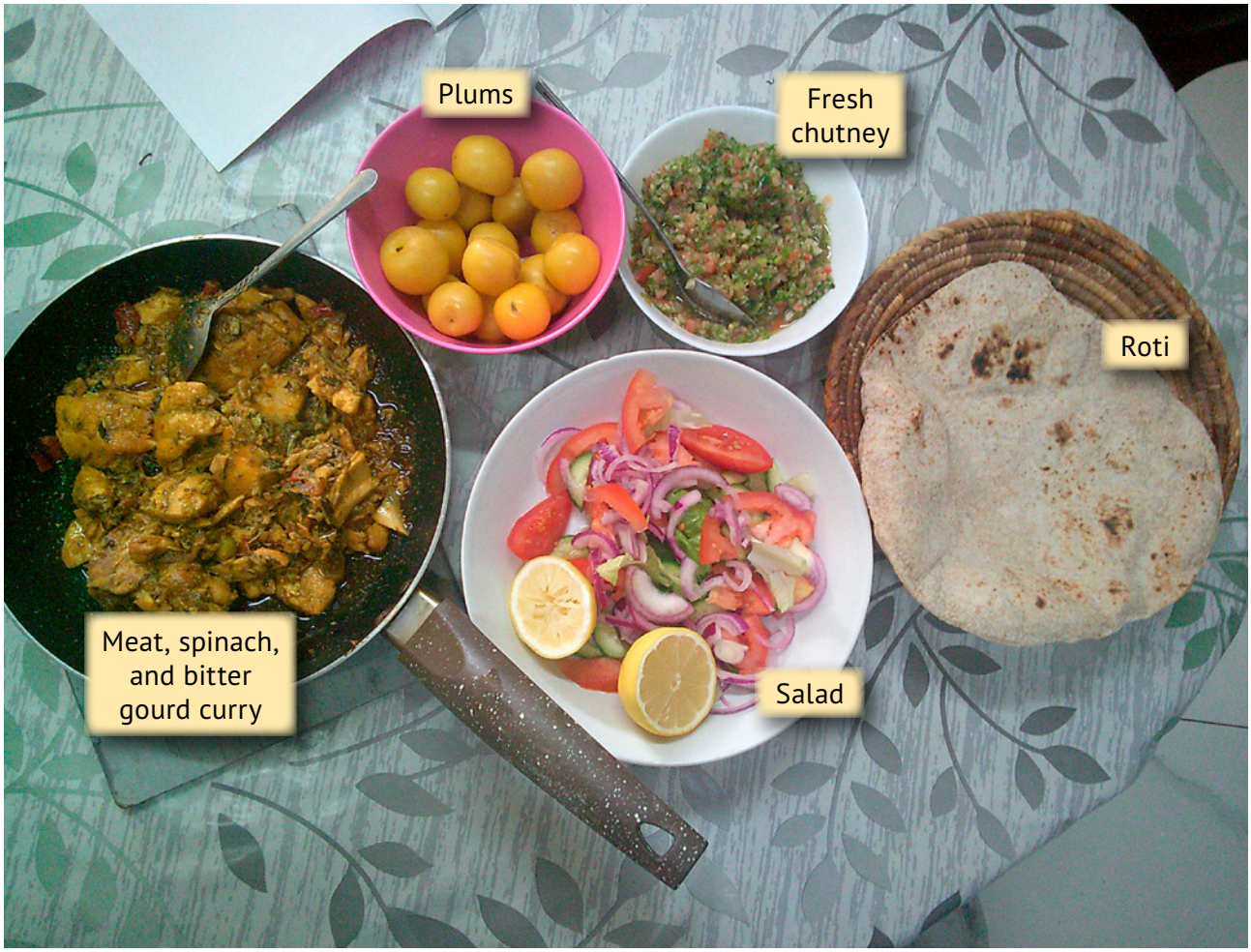
- Many Indians were vegetarian, and this was often related to religious practices
- Roti or chapatis as well as rice were eaten regularly
- Fresh vegetables were used in most meals, and salads were often included as a side dish. Apart from frozen peas, other frozen foods were not often used



Photovoice study: Findings by community

Pakistani Community

- Most ate meat but rarely ate fish
- Most meals included vegetables and/or salad
- Roti or chapatis as well as rice were eaten regularly
- Rice was often eaten with lentils (dhal)
- Sugary drinks were sometimes consumed with meals



Sharing our findings

To co-produce some outputs from the results of the project, we held some meetings with:

- Participants and older community members
- Stakeholders from the NHS, education, food supply chains and commissioning backgrounds

Their knowledge and expertise helped shape our resource development.

Different communities had preferred information in different formats – some wanted it as flyers or booklets; some wanted it as soft copies they could access on their phones.

Stakeholders expressed interest in a training resource.



Sharing our findings: Photo exhibition

- We held photo exhibitions in different locations, including community and interfaith spaces
- Showcased the work of the participants to members of the public
- Generated discussions about nutrition in later life with community members





Sharing our findings: Photo exhibition





Output: Videos and information leaflets

We created videos to showcase the co-production process used in this project.

- Included perspectives from project partners and participants
- Highlighted the importance of building relationships based on trust
- Participants talked about their experience of a research study and their message to others thinking of taking part in future research
- The videos can be found here: **https://nccdsw.co.uk/clusters/research/tangerine-nutritional-health-and-ageing-in-older-ethnic-minorities**

We have created a leaflet providing 10 key tips for healthier ageing in ethnic minority communities.

- The leaflet can be found on the next page. It is also available in Urdu, Hindi and Bangladeshi from the toolkit section of our website: **https://nccdsw.co.uk/clusters/research/tangerine-nutritional-health-and-ageing-in-older-ethnic-minorities**

TANGERINE Project

(nuTritional heAlth aNd aGeing in oldER ethnIc miNoritiEs)

10 key tips for healthier ageing in ethnic minority communities

1 Make traditional dishes healthier

Change how you cook or what you use

- Bake, grill, air fry, or steam instead of deep frying
- Use less fat. Choose vegetable oils like sunflower or olive instead of ghee or butter

2 Eat fast foods as a meal, not a snack

Pizza, fried chicken, chips, and burgers should be eaten as part of a meal, not between meals

3 Drink water often

Water or drinks without sugar are best

- Cut down on sugary drinks like fizzy drinks, sweet tea, fruit juice, and mocktails

4 Enjoy fruits in small amounts

Fruits give vitamins and fibre, but they have natural sugars.

- Eat different kinds of fruit
- Have 2–3 portions a day

5 Eat more vegetables

Add spinach, okra, peppers, or aubergine to curries, stews, salads, or rice dishes

6 Get enough protein

Eat meat, fish, eggs, or dairy every day

7 Try plant proteins too

Beans, lentils, chickpeas, tofu, and soya are good choices

- Mix them with grains and dairy or add to vegetable dishes for a balanced meal

8 Add more fibre

Use wholemeal flour for chapatis or oats for fufu. Try brown rice for biryani or jollof

- Mix wholemeal or brown with white versions if that works better for family meals

9 Choose healthy snacks

Eat biscuits, cakes, ladoo, baklava, crisps, meat pies, or puff-puffs only sometimes

- Choose handful of nuts, fruit, or yoghurt more often

10 Swap unhealthy pastries

Instead of croissants or bakery foods high in fat, choose porridge, wholegrain toast, eggs, or yoghurt for breakfast

For more information about the TANGERINE *Project or for copies of other language versions of this and other resources, visit:*

https://nccdsw.co.uk/clusters/research/tangerine-nutritional-health-and-ageing-in-older-ethnic-minorities

What next?

We are collaborating with Registered Nutritionists and Dietitians to create photo libraries showcasing nutrition and ageing in diverse communities.

- These will be freely available online as training resources for students and healthcare professionals

We continue to share our findings through community sessions offering practical tips on healthy eating in older age, and through academic publications and conference presentations.



With thanks

We would like to thank the following individuals for their time, expertise, and collaboration in making this project possible:

- Crystal Todd, Harvey Kennedy-Pitt and Lemmy Okelo from Black Beetle Health
- Jide Macaulay, Project Consultant for Black Beetle Health
- Poonam Paranjpe from Bournemouth, Poole and Christchurch Indian Community
- Noreen Shazhad and Seema Sheikh from Burnage Buddies
- Charles Kwaku-Odoi, Faye Ruddock and Miriam Ejim from Caribbean and African Health Network
- Councillor Abdul Malik, Coldhurst Ward, Oldham
- Anwar Ali and Muzahid Khan from Upturn
- Abdul Kabir Chowdhury and Rubena Begum from University of Chester

For more information about the *TANGERINE* Project or for copies of this and other resources, visit **https://nccdsw.co.uk/clusters/research/tangerine-nutritional-health-and-ageing-in-older-ethnic-minorities**

Co-produced by *TANGERINE* Project Participants and Project Partners Research team members:

Name	Role	Institution	Phase 1	Phase 2	Phase 3
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Prof. Basma Ellahi	Co-Investigator	Canterbury Christ Church University	Lead	Co-lead	Co-lead
Dr. Pooja Shah	Postdoctoral researcher	Bournemouth University	✔	✔	Co-lead
Prof. Lee-Ann Fenge	Co-Investigator	Bournemouth University		✔	Co-lead
Prof. Rebecca Hardy	Co-Investigator	Loughborough University		Co-lead	
Dr. Hibbah Osei-Kwasi	Co-Investigator	Loughborough University	✔	✔	✔
Dr. Reena Vijayakumaran	Co-Investigator	Bournemouth University	✔	✔	✔
Mary Demopoulos	Project co-ordinator	Bournemouth University	✔	✔	✔
Dr. Sophia D Amenyah	Co-Investigator	Northumbria University		✔	
Dr. Mayada Demashkieh	Researcher	Loughborough University		✔	
Dr. Angela Prah	Co-Investigator	Bournemouth University			✔
Karen Light	Researcher	Bournemouth University			✔

Phase 1: Co-production

Phase 2: Data collection and analysis

Phase 3: Dissemination and impact