

# Enhancing Vaccine Uptake through Behaviour Change Theory-based Social Media Interventions: A Framework-Driven Approach and Case Study among Chinese University Students in the UK

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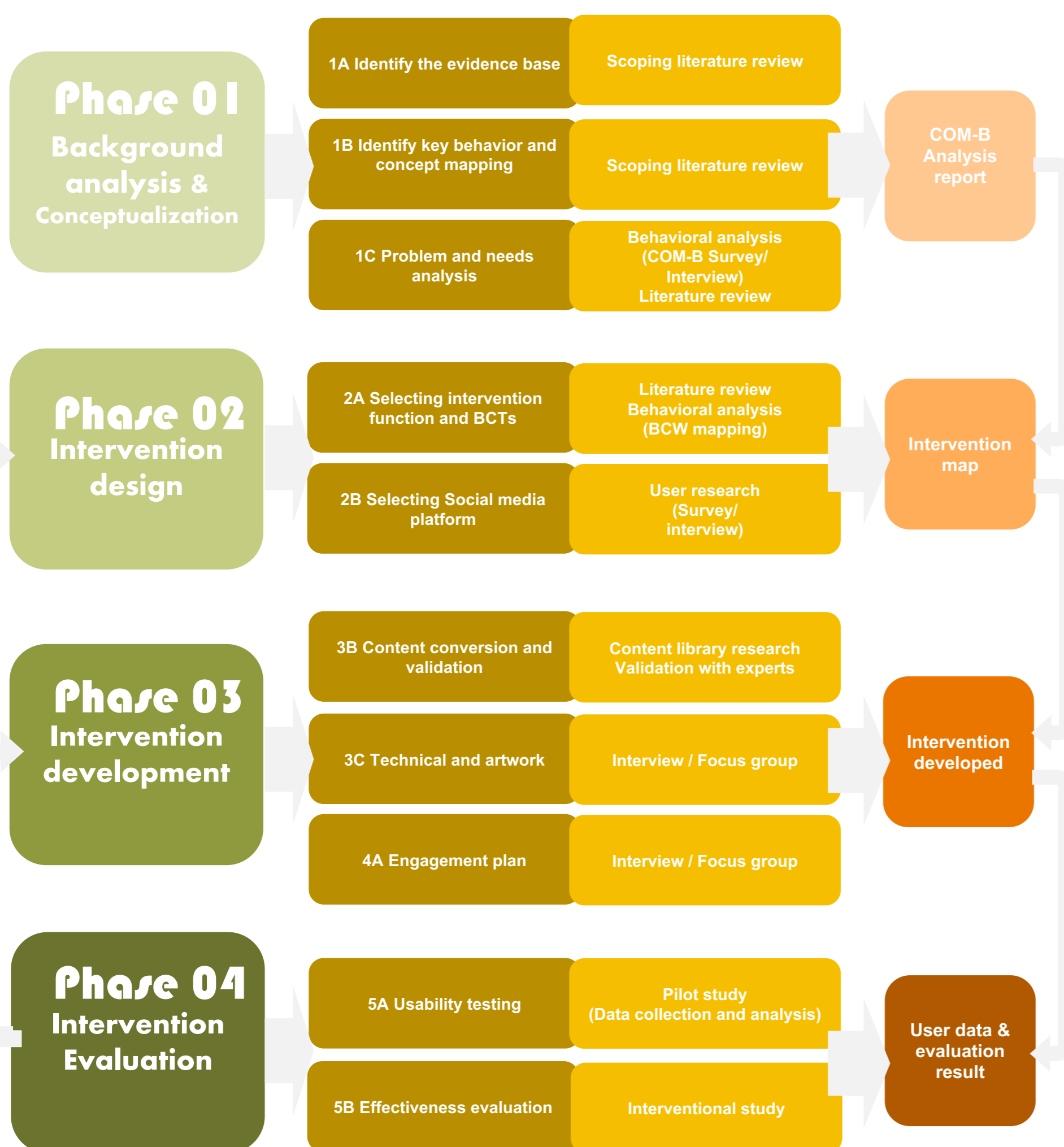


## BACKGROUND

The significance of effective risk communication in pandemic preparedness and resilience building is emphasized, especially with the expected spread of misinformation and reluctance to adopt risk reduction measures. Vaccination, the most efficient way to manage and prevent infectious diseases, has been impeded by vaccine hesitancy, fuelled by false information and disinformation. Thus, it is crucial to comprehend vaccination behaviour and develop specific interventions to enhance pandemic preparedness and resilience planning.

The study investigated how the behaviour change theories informed social media interventions could be designed and utilized to enhance vaccine uptake. To accomplish this, a mixed-method, three-course natural experimental design was implemented, using Chinese college students studying in the UK as the case study.

## METHODOLOGY



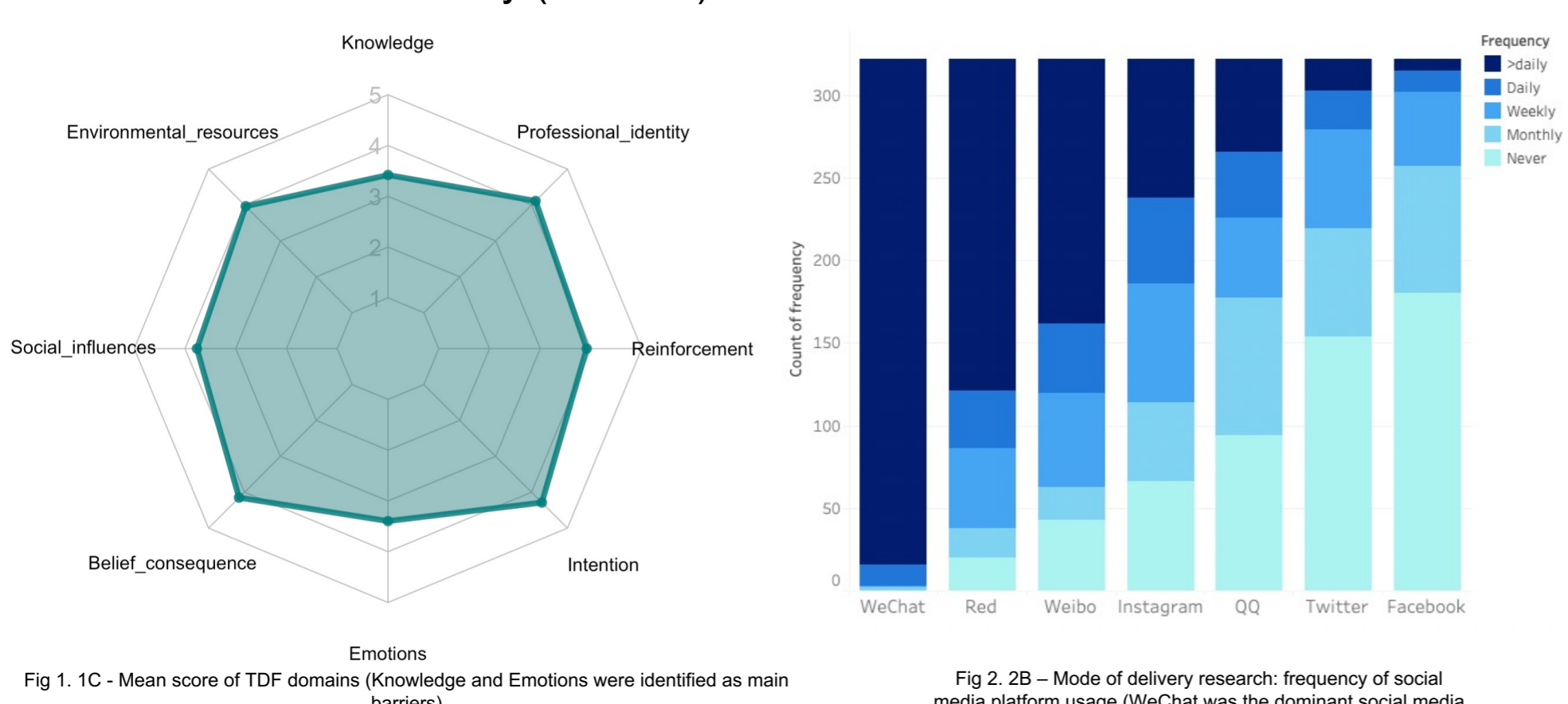
## CASE STUDY

### Procedure

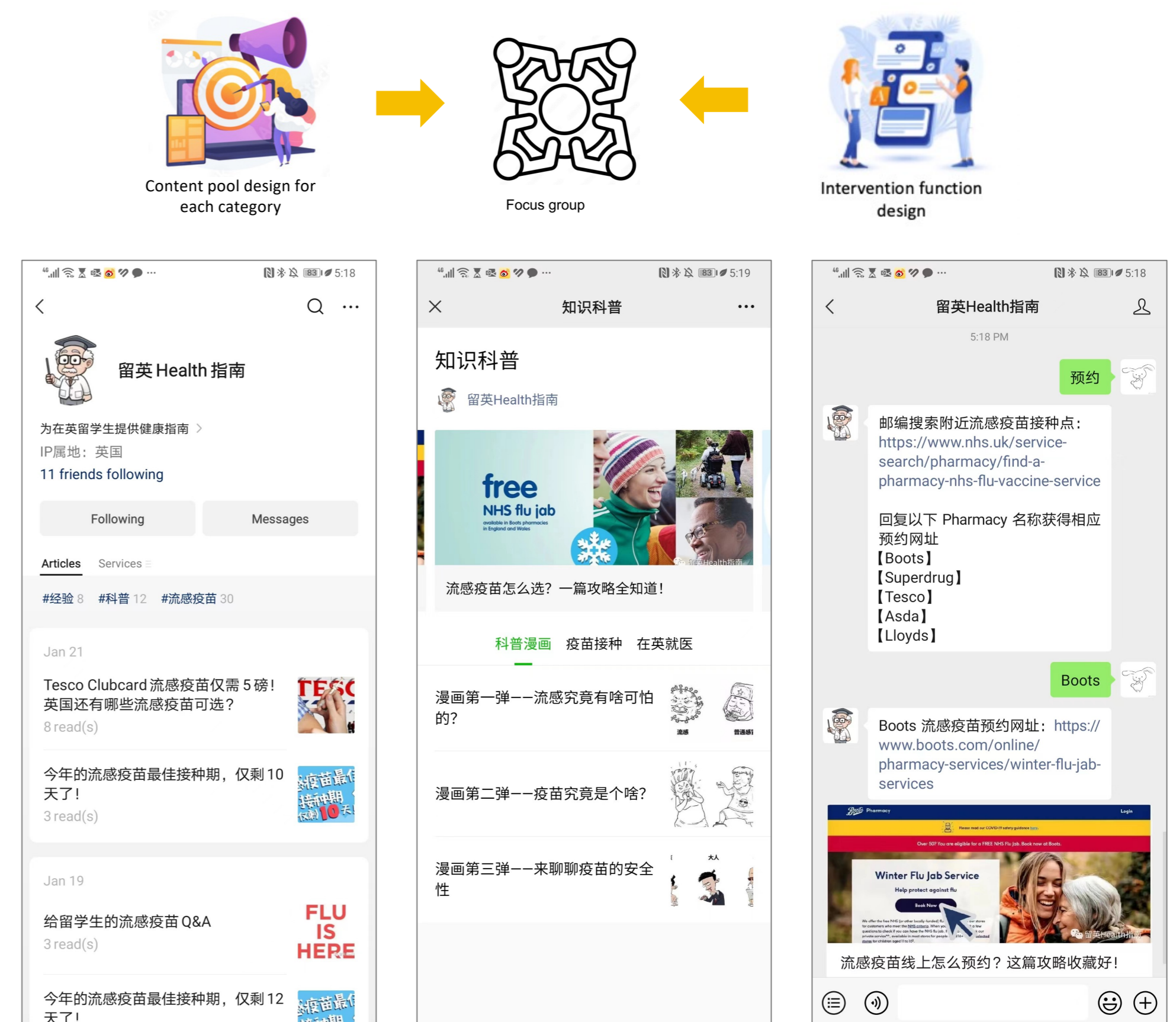
- Identifying the determinants that influence the students' vaccine decision;
- Systematically explore the intervention functions and strategies that likely to be effective in enhancing vaccine uptake;
- Design the intervention informed by theory and first-hand data collected through the survey, interview, and focus group;
- Pilot the intervention and evaluate its effectiveness

### Phase 1 Background analysis (User research)

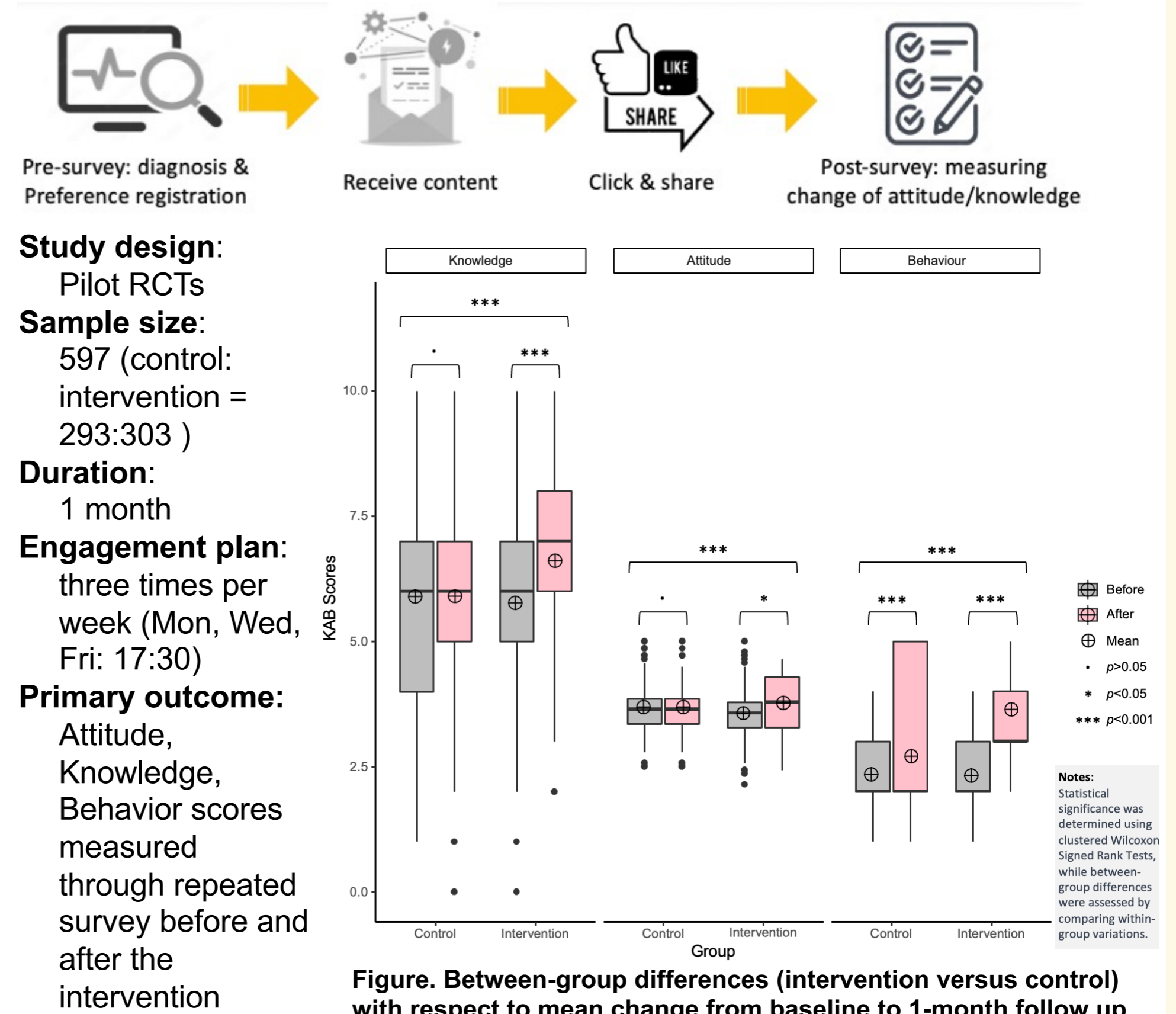
A cross-sectional survey (N = 404)



### Phase 2 Intervention design & development



### Phase 3 Evaluation



## SUMMARY

**Intervention development:** A multi-component intervention was created, delivered through WeChat based on the background study and user research through survey and focus groups. The three components include **Educational content, Auto-reply functions and Reminders.**

**Efficacy:** The intervention was tested using a quasi-experimental design over a one-month period. The WeChat intervention effectively boosted vaccination knowledge and attitudes toward influenza vaccination among Chinese students. Changes in intended behaviour were mediated through concurrent changes in both knowledge and attitude.

### Published work

- Li, L., Wood, C. E., & Kostkova, P. (2021). Vaccine hesitancy and behavior change theory-based social media interventions: a systematic review. *Translational behavioral medicine*.
- Li, L., Yang, L., Wang, Q., Wood, C. E., & Kostkova, P. (2023). Comparing factors influencing seasonal influenza vaccine acceptance and intentions among Chinese university students residing in China and UK: A cross-sectional study. *Human Vaccines & Immunotherapeutics*, 19(3), 2290798.

## Reference

- Michie, S., van Stralen, M. M., & West, R. (2011a). The behaviour change wheel: A new method for characterising and designing behaviour change interventions. *Implementation Science*, 6(1), 42.
- Wilson, S. L., & Whysonge, C. (2020). Social media and vaccine hesitancy. *BMJ Global Health*, 5(10), e004206.
- Yeung, M. P. S., Lam, F. L. Y., & Coker, R. (2016). Factors associated with the uptake of seasonal influenza vaccination in adults: A systematic review. *Journal of Public Health*, 38(4), 746-753.
- Pagoto, S., Waring, M. E., May, C. N., Ding, E. Y., Kunz, W. H., Hayes, R., & Oleski, J. L. (2016). Adapting behavioral interventions for social media delivery. *Journal of medical Internet research*, 18(1), e5086.

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