MOH/S/IPTK/67.25(TR)

MINISTRY OF HEALTH MALAYSIA

TECHNICAL REPORT

THE USE OF BEHAVIOURAL SCIENCE IN ORGANISATIONS: A SURVEY AMONG THE MINISTRY OF HEALTH MALAYSIA'S WORKFORCE



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NMRR ID-23-03232-RLM

THE BEHAVIOURAL INSIGHTS UNIT
INSTITUTE FOR HEALTH BEHAVIOURAL RESEARCH
NATIONAL INSTITUTES OF HEALTH (NIH)
MINISTRY OF HEALTH MALAYSIA
2025

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Suggested citation:
The Behavioural Insights Unit, Institute for Health Behavioural Research, National Institutes of Health (NIH), Ministry of Health Malaysia (2025). The use of behavioural science in organisations: A survey among the Ministry of Health Malaysia's workforce.

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A SURVEY AMONG THE MINISTRY OF HEALTH MALAYSIA'S WORKFORCE

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GLOSSARY OF ACRONYMS

BI Unit	The Behavioural Insights Unit
IHBR	Institute for Health Behavioural Research
MOH	Ministry of Health Malaysia
NMRR	National Medical Research Registry
UHC	Universal Health Coverage
WHO	World Health Organization

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ACKNOWLEDGEMENT

The authors would like to thank the Director-General of Health and Deputy Director-General of Health (Research and Technical Support), Ministry of Health Malaysia for granting permission to publish this report. Our heartfelt gratitude goes to the Director of Institute for Health Behavioural Research, National Institutes of Health (NIH) for his valuable comments and suggestions to improve the report. We would also like to extend our appreciation to the World Health Organization for their support, which made the survey and report writing possible. Last but certainly not least, we extend our heartfelt thanks to the entire workforce of the Ministry of Health Malaysia across the country. Your support and active participation in this survey have been invaluable. We are deeply grateful for your dedication and contributions, which have made this initiative possible. Thank you very much for your commitment and collaboration.

EXECUTIVE SUMMARY

Globally, behavioural science is increasingly used by governments and organisations to study how cognitive, social, and environmental factors shape behaviour. The adoption of the Resolution on Behavioural Sciences for Better Health at the 76th World Health Assembly in 2023 marked a key milestone, encouraging countries to advance its use. As the resolution's sponsor, Malaysia is working to improve the understanding and application of behavioural science in health. To support this, the Behavioural Insights Unit at the Institute for Health Behavioural Research conducted an online survey between February 26 to April 30, 2024, to identify barriers and enablers for applying behavioural science within Malaysia's Ministry of Health (MOH). The survey, adapted from a World Health Organization tool developed with input from global experts, comprised 28 questions across nine sections. It was translated into Malay using the back-translation method and tested for reliability using Cronbach's alpha.

Out of 1,200 MOH employees who responded nationwide, 99.1% (n = 936) agreed to participate in the survey, exceeding the targeted sample size of 385. The highest participation came from the management and professional group (48.4%) and the support group (48.3%). Temporary staff (MySTEP) and top management had nearly identical participation rates, at 1.9% and 1.4%, respectively. Among the participants, 36.7% worked in hospitals, 21.8% in District Health Offices, and 12.9% in State Health Departments. About 7.9% were based at the MOH headquarters, 5.3% at the MOH's training institute, and 5% at institutions such as the NIH, the National Cancer Institute, and the National Public Health Laboratory.

A total of 37.4% of the 936 participants reported being unsure about their understanding of behavioural science. In contrast, 35.0% classified themselves as novices, 27.0% as competent, and only 0.5% as specialists. Even among healthcare professionals with 20 or more years of experience, 38.4% considered themselves beginners, while more knowledgeable individuals ranked higher. This survey revealed that 29.5% of participants with at least 10 years of experience were unsure about their competency in behavioural science. Approximately 23.4% of the support group and 22% of the management and professional group reported incorporating a behavioural science approach into their work.

Approximately 16% of the management and professional group and 14% of the support group were uncertain about utilising a behavioural science approach. Moreover, about 22% of all participants indicated that they do not apply behavioural science in their work. Only 0.4% of participants considered themselves absolute experts in behavioural science, while 21.1% reported having proficient knowledge in the field.

Additionally, 27.3% identify as beginners indicating basic familiarity with behavioural science principles. Meanwhile, 29.2% of participants are uncertain about their level of knowledge in this area. A cross-tabulation analysis showed that 53% of the support group and 43.9% of the management and professional group reported being beginners in behavioural science. Furthermore, 48% of both groups were unsure about their level of knowledge in this field.

Regarding the difficulty of carrying out behavioural science activities in their work, 20% of participants identified implementation as the most challenging aspect. Lack of time and inadequate technical support (both at 14%) were also cited as significant barriers. To facilitate the application of behavioural science, 16% of participants highlighted the need for guidelines, training, and expert advice. Overall, 62% agreed that the MOH supports the use of a behavioural science approach in their work. Approximately 25% believed that behavioural science enhances the understanding of complex problems, while 20% stated that it contributes to achieving better outcomes.

The results show that clear guidelines, expert advice, and teamwork can facilitate the effective use of behavioural science. The survey also highlights the need for ongoing training and skill-building to help employees feel confident and prepared to apply behavioural science in their daily work.

1.0 INTRODUCTION

1.1 Recognising the important of behavioural science for health

Behavioural science is increasingly being acknowledged and embraced by authorities, governments, and international organisations globally as an effective approach for examining the cognitive, social, and environmental factors that serve as barriers or facilitators to human behavior (1). The significance of behaviour in influencing public health outcomes is unequivocal. By uncovering insights into what drives behaviour at individual, community, and population levels, behavioural science provides valuable evidence that can enhance the design of policies, programmes, communications, products, and services. Predicting behaviour and supporting behaviour change is neither obvious nor common sense. It requires careful, thoughtful science that leads to a deep understanding of the nature of what motivates people and the social and economic pressures that act upon them. If we understand these, we are better able to support them to change (2).

This evidence-based approach helps create more effective and targeted interventions, ensuring that initiatives are better aligned with the needs and motivations of the people they aim to serve. As a result, behavioural science is becoming an essential component in addressing complex societal challenges and improving outcomes across various sectors.

1.2 WHO Resolution on Behavioural Science for Better Health

The adoption of the Resolution on Behavioural Sciences for Better Health at the 76th World Health Assembly in Geneva in 2023 represents a significant milestone in global health policy (3). This resolution calls upon Member States to acknowledge and actively promote the integration of behavioural sciences into public health strategies and interventions. The resolution recognises that behavioural science is an interdisciplinary scientific framework focused on understanding human actions, along with their psychological, social, and environmental drivers, determinants, and influencing factors. It highlights the critical role of behavioural science in enhancing health outcomes and emphasises the importance of high-quality behavioural data in informing health sector strategies. Furthermore, the resolution acknowledges that no single discipline can fully explain how to support individuals in adopting healthier behaviours to achieve better health outcomes. It emphasises the value of behavioural science in elucidating how behavioural influences and communication strategies shape decision-making processes.

The resolution also stresses the contribution of behavioural science in advancing Universal Health Coverage (UHC) and in supporting prevention, preparedness, and response efforts during public health emergencies. It calls for the development of capacity to systematically integrate evidence, including insights from behavioural science and implementation studies, into health policies and programmes. Finally, the resolution urges Member States to mainstream behavioural science approaches within health policies and to advocate for essential structural supports, such as the establishment of dedicated behavioural science teams, units, or functions, as well as the allocation of adequate funding and human resources to sustain these efforts.

As the proposer and sponsor of this resolution, Malaysia has taken a leadership role in championing the use of behavioural science to address health challenges. In line with this commitment, Malaysia is actively working to deepen the understanding and practical application of behavioural science within its health sector. This includes promoting research, capacity-building, and the implementation of

evidence-based interventions to improve health outcomes and address behavioural barriers to well-being. Malaysia aims to set a precedent for other nations in leveraging behavioural insights to create more effective and equitable health systems.

A comprehensive understanding of the current knowledge and attitudes regarding the application of behavioural science within an organization is crucial. This understanding serves multiple purposes, including assessing people's expectations concerning the future utilization of behavioural science and identifying both barriers that impede its implementation and enablers that facilitate its integration into practice (4).

1.3 The Behavioural Science Workforce Survey

As the World Health Organization (WHO) advances efforts to integrate and expand the use of behavioural science in public health organisations, Malaysia has proactively undertaken *The Behavioural Science Workforce Survey* within Ministry of Health (MOH) Malaysia's workforce. This survey tool was designed to help organisations identify barriers and enablers for the systematic application of behavioural science in their public health workforce, policies, and programmes (5).

According to the WHO, this tool is intended for teams or units within organisations that are either responsible for or interested in developing a behavioural science function. By implementing the survey internally, these teams can identify factors that support or hinder the systematic use of behavioural science within their organization. The insights gathered can inform strategy development, establish a baseline, or facilitate engagement with senior management and colleagues. However, it is important to assess the workforce's perception of and readiness to respond to such a survey. If acceptance is low or familiarity with the method is limited, alternative approaches such as semi-structured interviews or focus group discussions, should be considered.

Within the MOH, behavioural science has long been used to enhance public health through various campaigns, initiatives, and policies. However, since 2022, the importance of behavioural science has become a top priority for the MOH. As a result, the Institute for Health Behavioural Research (IHBR) under the National Institutes of Health Malaysia has established the Behaviour Insights Unit. A key responsibility of this Unit is to strengthen behavioural data through research in order to propose and implement more effective intervention strategies using a behaviour insights approach. To lead and enhance the utilisation of behavioural science within the MOH, it is essential to assess the level of understanding and current application of behavioural science among the MOH workforce. Therefore, conducting a thorough assessment of behavioural science knowledge and its application within the MOH is a fundamental step in promoting evidence-based decision-making, enhancing the effectiveness of public health interventions, and building a workforce that is well-versed in leveraging behavioural science principles to address health challenges effectively.

1.4 Objectives of the survey

The objective of this survey is:

i) to understand how behavioural science is currently applied across the MOH Malaysia’s workforce
ii) to identify the internal barriers and enablers influencing the effective and widespread application
iii) of behavioural science within the MOH Malaysia's workforce.
to explore how MOH Malaysia can use it more broadly and systematically.

The findings can be utilised to develop strategies, establish a baseline, or engage top management and colleagues. The survey can also combined with other methods to gather information about behavioural science across the workforce.

2.0 METHODOLOGY

2.1 Survey design

This survey employed a cross-sectional study design, which involves collecting and analysing data from a specific population (the MOH workforce) at a single point in time. This approach provides a snapshot of the variables of interest, enabling researchers to assess the prevalence of certain characteristics, behaviours, or opinions within the population at the time of data collection.

2.2 Survey population

The survey was conducted across the MOH workforce in Malaysia.

2.3 Sample size

Sample size estimation was calculated using the population proportion formula. The sample size was determined based on the estimated proportion of awareness of behavioural science was 50% and a population size of 274,987 positions in the MOH as of December 31, 2022. If the Type I error probability and precision is 0.05 and 0.05, the survey required 385 samples.

2.4 Sampling procedures

In this survey, the convenience sampling method was utilised, with participants selected based on specific characteristics, namely those who have applied behavioural science in their work.

2.5 Inclusion and exclusion criteria

For inclusion criteria, these characteristics will be included in the study:

i) MOH employees.
ii) Those who have been identified as using behaviour science in their work.

As for exclusion criteria, those who refuse to participate will be excluded.

i) MOH employees who are answered not involved in behavioural science work

2.6 Survey tool

2.6.1 Section and variables of the survey tool

The survey instrument was adapted from the document *Use of Behavioural Science in Organisations: A Workforce Survey. A Tool for Behavioural Insights* published by the WHO in 2023 (5). It was developed by the WHO Behavioural Insights Unit and reviewed by experts including members of the WHO Technical Advisory Group on Behavioural Insights and Sciences for Health and behavioural science experts from Johns Hopkins University and the Joint Research Centre of the European Commission. The instrument comprises of five sections with 31 items.

Section	Details
Section 1	Knowledge and use of behavioural science
Section 2	Use of behavioural science and behavioural interventions
Section 3	Barriers and enablers to the use of the behavioural sciences
Section 4	Opinions about the role of behavioural science
Section 5	Information about the participant and their role

Table 2.1: Section and name of the variables

2.6.2 Theory and evidence-based approach of the survey tool

The survey was designed using both a theory-based and evidence-based approach. It followed the COM-B model of behaviour framework, with the questions developed by the WHO Behavioural Insights Unit through an iterative process. The survey aimed to assess participants' knowledge of the use of behavioural science within the organisation, their familiarity with it, attitudes towards it, expectations for its application, current utilisation, and the barriers and enablers experienced by the MOH workforce. In sections 1 and 4 of the survey the following questions require adaptation to the priority functions and aims of your organisation, such as:

Question 5:
As part of which activities do you use behavioural science?

Question 17:
How much do you think the behavioural sciences can help to deliver the following outcomes for [enter name of organization here]?

In sections 3 and 4 of the survey, the following questions may need to be adapted to reflect the potential options that could be offered, such as:

Question 12:
To what extent do the following things make it difficult for you to use behavioural science in your work?

Question 14:
To what extent would the following make it easier for you to apply behavioural science to your work?

Question 20:
In your opinion, which of these should be the priorities for enabling people to use behavioural science across [enter name of organization here]?

In Section 4 of the survey, there may be sensitivities regarding the solicitation of participants' opinions on strategic matters. However, their input is highly valued, and their responses will be considered essential evidence. Lastly, in Section 5 of the survey, the 'Demographics' section needs to be amended to align with organizational structures and professions.

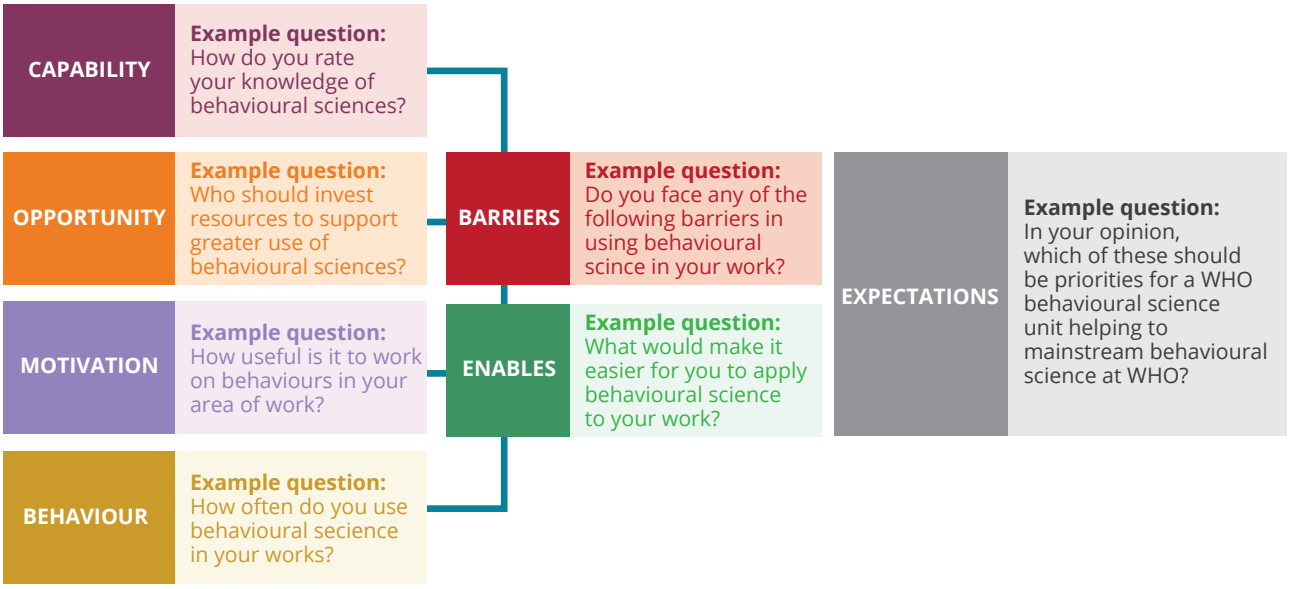


Figure 2.1: COM-B Model and example of questions

Domain	Item	Total item
Capability	1,2,10,11	4
Opportunity	16,19	2
Motivation	3,7,17,18	4
Behaviour	4,5,8,9	4
Barriers	12-13	2
Enablers	14-15	2
Expectations	20-21	2
Information about participant	6, 22-31	11
Total items		**31**

Table 2.2: Domain based on COM-B Model and number of items

The survey instrument is based on two key sources: (i) an internal document from 2019 that mapped WHO units with expertise in behavioural and social sciences, and (ii) an independent external assessment conducted in 2020, which evaluated the use of behavioural and social sciences across the organisation's functions between 2015 and 2019 (internal document). Based on these assessments, a core set of constructs for the survey was identified. The WHO Behavioural Insights Unit then created a preliminary survey using the information mentioned earlier and sought feedback from experts in the field, including members of the WHO Technical Advisory Group on Behavioural Insights and Sciences for Health, as well as behavioural science experts from Johns Hopkins University and the Joint Research Centre of the European Commission

2.6.3 Testing the survey tool

During survey testing, the WHO Behavioural Insights Unit collected both explicit (verbal) and implicit feedback, with the latter being less prone to bias. A second draft was tested through cognitive interviewing with 15 WHO staff volunteers from various departments. They completed the survey online using think-aloud and probing-question techniques. Feedback from this stage was analysed to refine the final version. The final survey was voluntarily distributed within WHO, tested at the national level by one Member State, and reviewed by another Member State and an international organisation. Peer reviewers, selected for their expertise in behavioural science and survey development, assessed the survey and considered its potential human rights or inequality impacts.

2.6.4 Translation of the survey tool to Malay version

The tool was translated from the English version to Malay version using the back-translation method (6). This method enhanced the validity and reliability of the translated items and minimised potential biases introduced by language and cultural differences. It was an essential step in ensuring that data collected from different language versions were comparable and could be appropriately analysed in cross-cultural studies.

After the translation was revised, the tool was pretested in a paper format with 10 participants (Health Education Officers from NIH and the Health Education Division, MOH) to assess clarity, wording suitability, and the average completion time. The tool was then amended based on feedback and converted into a web-based survey using Google Forms. It was piloted with 30 participants from various professions at NIH and MOH headquarters to evaluate the clarity, formatting suitability, and reliability of the tool.

2.7 Survey duration

The survey was conducted between 26 February to 5 April 2024.

2.8 Data collection procedure

Data were collected through an online survey using Google Forms. Prior to data collection, an official letter from the Director-General of Health was circulated to all MOH divisions, State Health Departments, and Health Institutions to request participation. Implied consent was obtained for the survey, and participants were not required to sign in to an account to complete the survey. Participants were invited to take part in the online survey through three primary channels: distribution of a QR code or link via their institution's formal email, posting the survey on the MOH webmaster platform, and sending an official letter to department heads, that included both the survey link and QR code. Alongside, information about the survey was regularly shared through MOH's social media platforms, including Facebook and X.

The initial page of the URL link provided comprehensive information, including the title of the survey, the name of the investigator and institution, an introduction to the study, a statement on withdrawal, the purpose of the survey, survey duration, survey procedures, responsibilities, potential risks and side effects, benefits, confidentiality, and contact details.

After reviewing the information page, participants were asked two essential screening questions as part of a preliminary evaluation to determine their eligibility to participate in the study. These screening questions addressed their workplace affiliation and their use of behavioural science principles, as outlined in the guiding statement. After responding to these screening questions, participants were given the option to either consent to or decline participation in the survey ("I agree" or "I disagree"). Participants had the right to withdraw from the survey at any time, exit the site freely, and no action was taken to retain the data they provided. As a result, all data were securely disposed of.

2.9 Data analysis

The participants completed the questionnaire directly via Google Forms, and each completed questionnaire was stored in the final database and downloaded as a Microsoft Excel sheet. Microsoft Excel was used for editing, sorting, and coding the data. The Excel file was then imported into SPSS software. All statistical analyses were performed using the SPSS statistical package version 20.0 for Windows (SPSS Inc., Chicago, IL, USA). For data analysis, the survey employed descriptive analysis to summarize individual variables and patterns using percentages, frequencies, and means.

2.10 Ethical consideration

The Medical Research and Ethics Committee (MREC) granted ethical permission for this survey. The registration number is NMRR ID-23-03232-RLM.

3.0 RESULTS

3.1 Survey participant's and application of behaviour science

3.1.1 Total breakdown of the survey participants

A total of 1,200 MOH employees across the country responded to the survey, with 99.1% (n = 936) agreeing to participate, significantly exceeding the targeted sample size of 385 participants. The highest participation rates were observed among the management and professional group (48.4%) and the support group (48.3%). In contrast, participation rates from temporary staff (My STEP) and top management were lower, at 1.9% and 1.4%, respectively.



48.4%
Management and professional group

48.3%
Support group

1.9%
My STEP

1.4%
Top management

Regarding the distribution of participants across various organisational settings, 36.7% worked in hospitals, 21.8% in District Health Offices, and 12.9% in State Health Departments. Additionally, 7.9% were based at the MOH headquarters, 5.3% were affiliated with the MOH's training institute, and 5% were employed at institutions such as the National Institutes of Health (NIH), the National Cancer Institute, and the National Public Health Laboratory. This diverse participation across different sectors of the MOH workforce provided a comprehensive representation of the organisation.



36.7%
Hospital

21.8%
District Health Office

12.9%
State Health Department

3.1.2 Application of behavioural science across employee groups

Approximately 23.4% of individuals in the support group and 22% of those in the management and professional group reported integrating a behavioural science approach into their work. In contrast, around 16% of the management and professional group and 14% of the support group expressed uncertainty regarding the application of this approach in their roles. Furthermore, approximately 22% of all participants indicated that they do not currently utilise behavioural science in their professional activities. These findings highlight varying levels of engagement with behavioural science across different employee groups within the organisation with a significant portion remaining either uncertain or not incorporating these principles into their work.

3.1.3 Assessment of behavioural science knowledge across employee groups

Approximately 23.4% of individuals in the support group and 22% of those in the management and professional group reported integrating a behavioural science approach into their work. In contrast, around 16% of the management and professional group and 14% of the support group expressed uncertainty regarding the application of this approach in their roles. Furthermore, approximately 22% of all participants indicated that they do not currently utilise behavioural science in their professional activities. These findings highlight varying levels of engagement with behavioural science across different employee groups within the organisation with a significant portion remaining either uncertain or not incorporating these principles into their work.

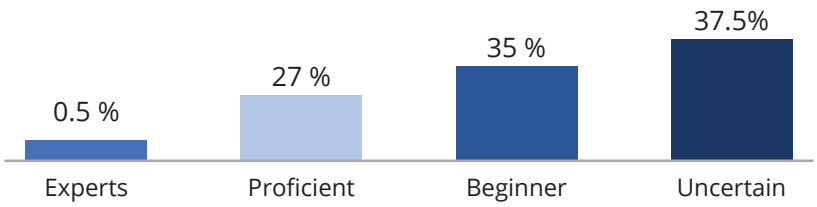


Figure 3.1 Assessment of behaviour science level

Only 0.5 % of participants self-identified as experts in behavioural science, while 27 % reported possessing a proficient level of knowledge in the field. Additionally, 35 % considered themselves beginners, reflecting a basic understanding of behavioural science principles. A total of 37.5 % participants expressed uncertain regarding their level of expertise. A cross-tabulation analysis revealed that 53% of participants in the support group and 47% in the management and professional group classified themselves as beginners in behavioural science.

3.2 Knowledge and use of behavioural science in the work

3.2.1 Familiarity with the behaviour science terms

We listed 12 behavioural science terms and aimed to assess participants' familiarity with them. The results are as follows:

Terms	Participants familiarity with the terms
Social norms	60.6%
Health belief model	51.8%
Theory of planned behaviour	48.1%
Messenger effect	45.9%
Default concept	45.5%
Nudges	42.4%
Cognitive bias	39.5%
Commitment device	37.1%
System 1 and System 2	29.2%
Framing effect	29.7%
Heuristics	16.7%
Priming	15.6%

Table 3.2 Behaviour science terms and participant's familiarity

3.2.2 Usefulness of addressing behaviours in participant's work area

A total of 68.3% of participants recognised the benefits of addressing behaviours within their respective work domains. Besides that, 25.5% of participants expressed neutrality, suggesting that a substantial portion of the population may not have strong opinions on the matter. About 6% stated they do not know while only 0.2% indicated that it was not useful.

3.2.3 Frequency of using behavioural science during work

Participants reported using behavioural science in their work most of the time (25%). About 33.7% stated they use it occasionally, while 9.3% indicated they rarely apply it. Approximately 32.1% were uncertain about their usage of behavioural science.

3.2.4 Areas of work that require the application of behavioural science

Among all participants, 77.4% identified communication and advocacy as the primary areas where behavioural science approaches are essential. Furthermore, 40.1% pointed to capacity-building training, 32.2% mentioned programme or project design, 23.4% highlighted policy design, and 28.8% emphasised research as areas that would benefit from behavioural science methods. In addition, 19% of participants were uncertain about which areas require the application of such approaches.

3.2.5 Behavioural science methods considered useful

In this survey, participants were asked about on the perceived usefulness of five behavioural science data collection methods. The observational method was rated as the most beneficial, with 67%. Followed closely by the qualitative method at 63.5%, mixed methods at 59.6%. The evidence synthesis methods, such as literature reviews or meta-analyses were rated at 54.3%, while 49% of participants found the quantitative method helpful.

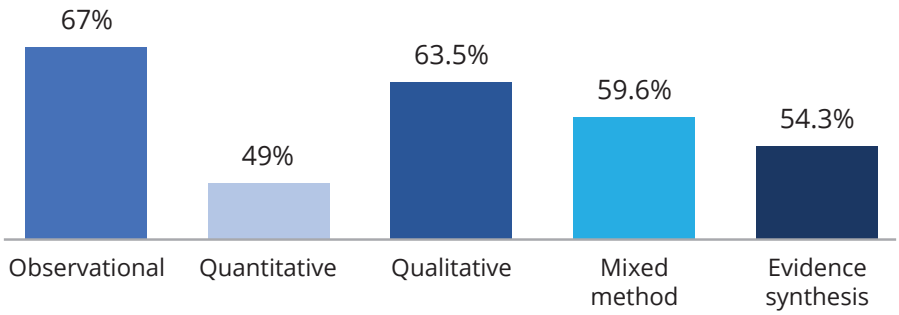


Table 3.2.5: Behavioural science method considered useful by participants

3.3 Use of behavioural science and behavioural interventions

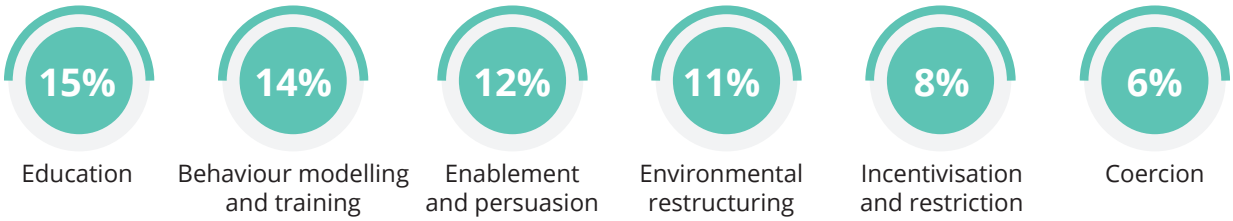
3.3.1 The most important phase to use behaviour science

Nearly 87% of participants agreed that the implementation phase is the most crucial for applying a behavioural science approach.



3.3.2 Most commonly use intervention strategy for behaviour change

When asked about the most commonly used interventions for behavioural change, approximately 15% of participants selected education. This was closely followed by behaviour modelling and training, each chosen by 14% of participants. Enablement and persuasion were each identified by 12% of participants, while environmental restructuring was selected by 11%. Incentivisation and restriction were each chosen by 8%, and the least frequently selected intervention was coercion, with only 6% of participants endorsing it.



3.3.2 Policy measures used to change behaviour

Regarding policy measures for behavioural change, guidelines and regulations were the most frequently mentioned by participants, each selected by 19%. This was followed by communication and marketing (15%), environmental or social planning (14%), and service provision (12%). Legislation (10%) and fiscal measures (8%) were also noted, while approximately 3% of participants expressed uncertainty.

3.4 Barriers and enablers to the use of the behavioural sciences

Sample size estimation was calculated using the population proportion formula. The sample size was determined based on the estimated proportion of awareness of behavioural science was 50% and a population size of 274,987 positions in the MOH as of December 31, 2022. If the Type I error probability and precision is 0.05 and 0.05, the survey required 385 samples.

3.4.1 Difficulty in applying behavioural science phase

In this question, participants were presented with six phases of programme planning or strategy development where behavioural science could be applied.

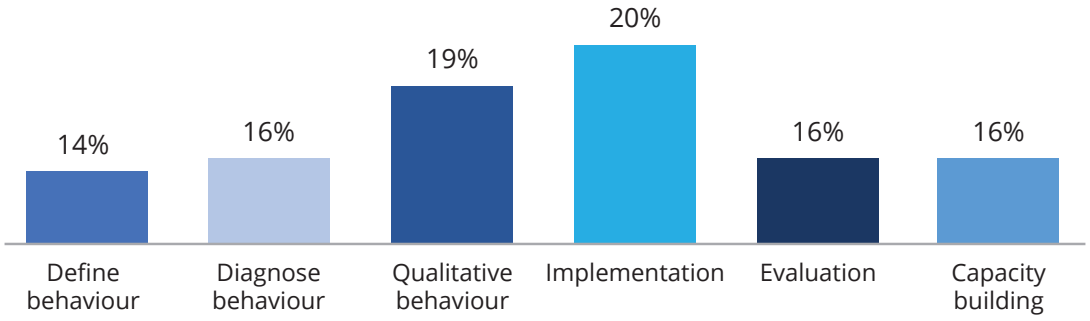


Figure 3.4.1: Difficulty in applying behavioural science phase

A total of 20% of participants identified the implementation phase as the most challenging. Intervention design was noted by 19% of participants, while diagnosing behaviour, evaluation, and capacity building were each reported as equally challenging by 16% of participants. Besides, 14% of participants indicated that defining behaviour posed difficulties. Analysis from the open ended question revealed that many participants perceived the implementation phase as particularly challenging, citing external factors such as heavy workloads, time constraints, communication issues, and a lack of sufficient knowledge.

3.4.2 Factors hindering the application of behavioural science

Participants highlighted lack of time and inadequate technical support (both 14%) as major challenges in applying behavioural science. These were followed by lack of funding, understanding, and support (13% each). Around 12% cited lack of prioritisation, 11% noted lack of interest, and 10% were unsure of the impact.



3.4.3 Factors facilitating the application of behavioural science

To apply behavioural science in their work, 16% of participants identified guidelines, training, and expert advice as key facilitators. This was followed by 14% who believed that a collaborative network, agreements with implementation partners to expedite data collection, and consultants would also be beneficial. Lastly, only 10% mentioned that funding would help ease the application of behavioural science in their work.

Factors	Percentage of participants
Guidelines	16%
Training	16%
Expert advice	16%
Collaborative network	14%
Agreements with implementation partners	14%
Consultant	14%
Funding	10%

Table 3.4.3: Factors facilitating the application of behavioural science

Findings from the open ended question demonstrated that it is crucial to have a concentrated effort to either promote or mainstream behavioural science in the workplace, including allocation of specific budget and more support from the management team.

3.5 Opinions about the role of behavioural science in the organization

3.5.1 MOH support for applying behavioural science

Overall, 62% of participants agreed that the MOH promotes the use of behavioural science in their work. While, 7.2% disagreed, 23.3% remained neutral, and 7.6% were uncertain.



3.5.2 Contribution of behavioural science to MOH outcomes

Approximately 20.5% of participants believed that behavioural science enhances the understanding of complex problems, while 20.1% stated it contributes to achieving better outcomes. Three aspects greater relevance, enhanced sustainability, and increased acceptance of interventions each received equal support at 19.8%.

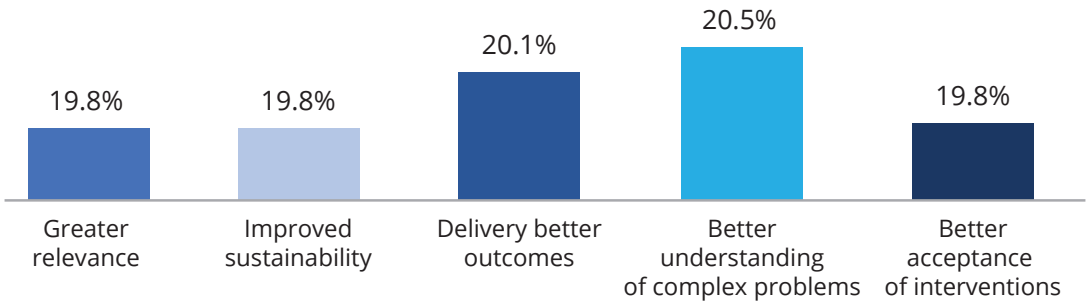
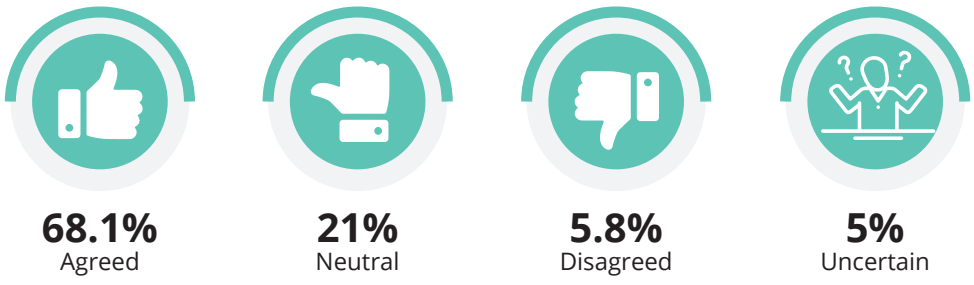


Figure 3.5.2: Contribution of behavioural science to MOH outcomes

Qualitative findings further revealed that 62.3% of participants recognised the potential of behavioural science to drive additional outcomes for the MOH.

3.5.3 Resource allocation for enhancing behavioural science utilisation

When asked whether the MOH should allocate resources to enhance the use of behavioural science, 68.1% of participants agreed with the proposition. Meanwhile, 21% remained neutral, 5.8% disagreed, and 5% were uncertain.



3.5.4 Key priorities for enhancing the use of behavioural science

Raising awareness (13.9%) and providing expert advice (13.5%) emerged as the top priorities for the MOH to support stakeholders and staff in effectively applying behavioural science. These were followed closely by research initiatives (12.6%), capacity building (12.5%), behavioural experiments (12.2%), project implementation (12.1%), and fundraising efforts (12%). Establishing connections with external parties was identified as the lowest priority, with 11.2% of participants highlighting its importance.

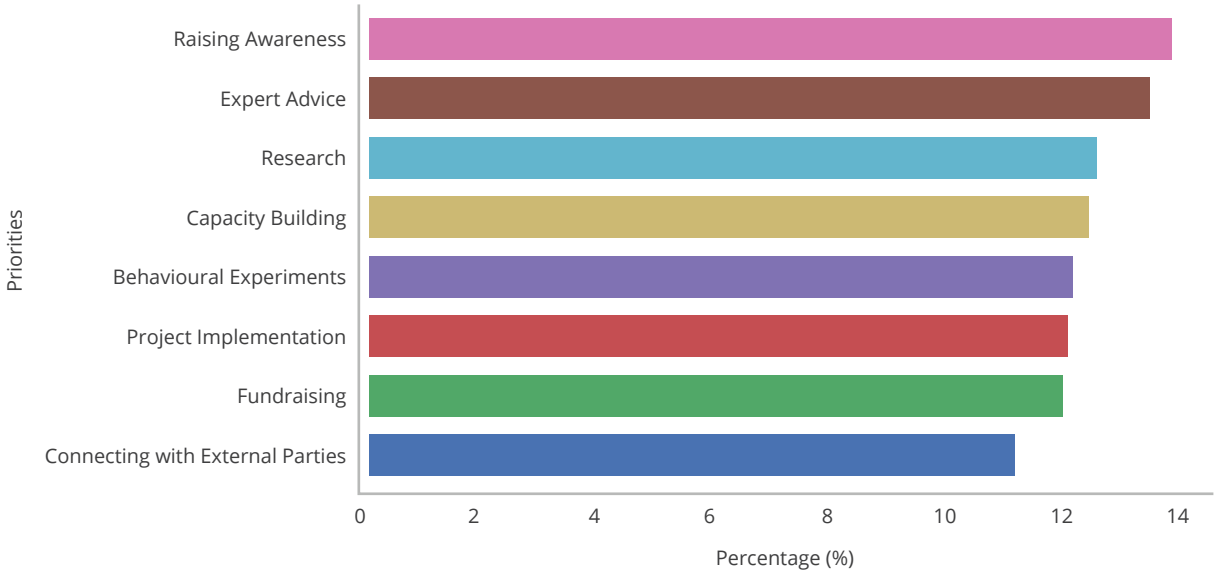


Figure 3.5.4: Key priorities for enhancing the use of behavioural science

3.6 Information about the participant and their role in the organization

Sample size estimation was calculated using the population proportion formula. The sample size was determined based on the estimated proportion of awareness of behavioural science was 50% and a population size of 274,987 positions in the MOH as of December 31, 2022. If the Type I error probability and precision is 0.05 and 0.05, the survey required 385 samples.

3.6.1 Working experience in MOH

The largest proportion of participants in this survey (29%) had between 10 and 14 years of experience at the MOH. This was followed closely by those with 20 or more years of experience (28.1%). Participants with 15 to 19 years of experience accounted for 20.5%, while 12.7% had between 5 and 9 years of experience. The smallest group (9.7%) comprised individuals with less than 4 years of experience at the MOH.

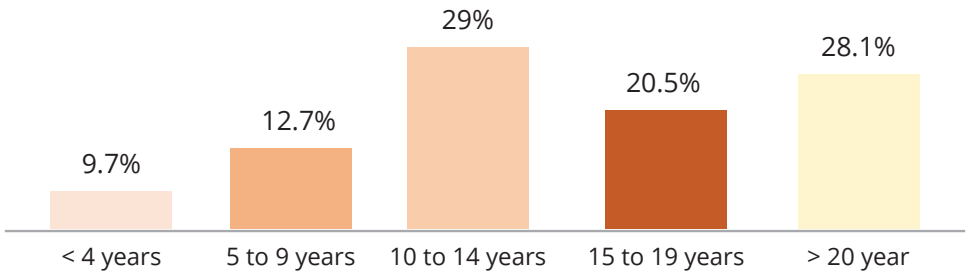


Figure 3.6.1 Participant's years of experience in MOH

3.6.2 Interest in learning more about behavioural science

Over half of the participants (59.5%) expressed a strong desire to learn more about behavioural science. Around 29.3% were uncertain, while 11.2% were not interested in expanding their knowledge in this area. Of the total 936 participants, 20.9% expressed an interest in learning more about behavioural science. This group included 21.0% participants, 13.4% from District Health Offices, and 7.3% from State Health Departments.



4.0 DISCUSSION

The survey aims to help organisations identify internal barriers and enablers to effectively applying behavioural science in problem definition, evidence collection, policy design, implementation, and evaluation.

Background of participants

The diverse work settings of participants ranging from clinical to public health environments, emphasises the broad potential for behavioural science to influence various aspects of healthcare delivery and administration. The survey reveals a well-experienced workforce at the MOH, with nearly 29% of participants having 10 to 14 years of experience and 28.1% boasting over 20 years. This suggests a strong foundation of institutional knowledge and expertise within the organisation. The distribution of experience levels indicates that while there is a significant proportion of seasoned professionals, there is also a smaller yet notable group of newer employees. This mix of experience can be advantageous for advancing mentorship and knowledge transfer, essential for enhancing the application of behavioural science in public health initiatives.

Utilisation of behavioural science

One of the findings indicates differing levels of engagement with behavioural science among various employee groups within the organisation. A significant proportion of employees remain uncertain or disengaged, with 16% of the management and professional group, 14% of the support group, and 22% of all participants indicating limited or no use of behavioural science in their roles. These results suggest that while some employees are actively applying behavioural science principles, a considerable proportion either lack clarity on its relevance or have not yet adopted it in their work. This disparity may stem from differences in awareness, training, or perceived applicability of behavioural science across roles. This in align with suggestion by OECD in 2017 (7) that despite growing interest in the behavioural science in the organisations globally, it remains underutilise in practice. A study on factors influencing the use of behavioural change evidence (8) cited in a strategy document for Public Health England (9) as essential for embedding behavioural insights, concluded that a coordinated approach is necessary. This includes promoting cultural and attitudinal change alongside providing relevant training and tools to support decision-makers and practitioners throughout the commissioning process. Moreover, the results highlight the potential for behavioural science to be more widely integrated, particularly in the organisational structures, such as a dedicated behavioural science function or focal person are established to support its adoption.



Barriers in applying behavioural science

Participants identified time constraints and insufficient technical support as the main challenges in applying behavioural science. Time constraints can be a significant barrier to applying behavioural science in an organisation, as employees may struggle to allocate sufficient time for research, analysis, and the integration of behavioural insights into their daily tasks, especially when faced with competing priorities and high workloads. In addition, a lack of understanding, prioritisation, and interest points to gaps in awareness and organisational commitment. Uncertainty about its impact indicates the need for clearer communication about the value of behavioural science. To address these issues, a comprehensive approach is needed, including better resource allocation, technical training, and efforts to raise awareness and prioritise behavioural science. Showcasing successful case studies could also help build interest and confidence among stakeholders.

Participants in the application of behavioural science identified several phases as particularly challenging, with implementation (20%) and intervention design (19%) being the most significant hurdles. This indicates that translating theoretical knowledge into practical applications is often fraught with difficulties. Besides that, diagnosing behaviour, evaluation, and capacity building were also noted as equally challenging (16% each), highlighting a broad spectrum of obstacles faced during the behavioural science application process. For example complexity of accurately assessing behaviours, the challenges associated with effectively measuring outcomes of interventions, and the necessity for ongoing skill development among personnel. Defining behaviour was less challenging but still posed difficulties for 14% of participants. Key challenges contributing to these difficulties include heavy workloads, time constraints, communication gaps, and limited knowledge among employees. These factors can hinder effective collaboration and the successful integration of behavioural science principles into organisational practices. For example, heavy workloads may prevent employees from dedicating sufficient time to understand and apply behavioural insights effectively, while communication gaps can lead to misunderstandings about the goals and methodologies of behavioural interventions. In summary, addressing these challenges requires a multifaceted approach that includes enhancing training programmes, improving communication strategies, and encouraging a culture of collaboration. Organisations can better support employees in navigating the complexities of applying behavioural science effectively.

Facilitating factors to the use of behavioural science

On the other hands, to facilitate the use of behavioural science in organisations, participants prioritize knowledge-building and collaboration over financial resources. This suggests that capacity development and partnerships are seen as more immediate facilitators, while funding, though important, is considered secondary. Efforts to integrate behavioural science should focus on providing clear guidelines, training, and fostering collaboration, as these are perceived as the most effective enablers by participants. Such collaborations can lead to improved understanding and application of behavioural principles, thereby enhancing organisational capacity without solely relying on financial resources. This aligns with the notion that supporting relationships and shared learning experiences can be more beneficial in the long term (10).

Overall, the majority of participants recognise the MOH's efforts to promote behavioural science, indicating a positive organisational push. However, the significant proportion of neutral, uncertain, or disagreeing responses suggests that awareness or engagement with these efforts may still be inconsistent across the workforce. While the MOH has made strides in promoting behavioural science, further efforts are needed to ensure broader understanding and adoption among employees. This may include offering more comprehensive workshops and courses on behavioural science principles, developing clear messaging to highlight the benefits and applications of behavioural science, encouraging teamwork and knowledge sharing among employees to foster a culture of collaboration, implementing specific projects that demonstrate the practical impact of behavioural science in real-world scenarios, and establishing systems for employees to provide input on behavioural initiatives, allowing for continuous improvement.

Strategies to enhance the use of behavioural science in MOH

Raising awareness (13.9%) and providing expert advice (13.5%) were identified as the primary priorities for the MOH to enhance the application of behavioural science among stakeholders and staff. The findings indicate that the MOH recognises the importance of foundational elements such as awareness and expert guidance in fostering effective use of behavioural science. By prioritizing these areas, the MOH can create a supportive environment that encourages stakeholders to engage with behavioural science principles actively. Also, focusing on research and capacity building can further enhance the organization's ability to implement evidence-based interventions effectively (12). These efforts will lay a strong foundation for integrating behavioural insights into public health strategies.

Interest in learning about behavioural science

The significant interest in learning about behavioural science suggests a recognition of its importance in improving health outcomes and enhancing professional practice within the MOH. This data suggests a shift towards a more evidence-based, behaviourally informed approach within the organisation, highlighting the need for targeted educational opportunities and resources to support the further development of behavioural science competencies.

5.0 CONCLUSION

The survey results have provided the MOH Malaysia with a foundational understanding and strategic framework for integrating behavioural sciences internally. Particularly, there is a pronounced demand for training in behavioural science among participants, highlighting the need for comprehensive programmes aimed at enhancing the knowledge and skills of MOH employees in effectively applying these principles. These insights will inform the prioritization of initiatives that enable staff to incorporate behavioural science into their work, ultimately improving health outcomes across Malaysia. Furthermore, the survey establishes a baseline for tracking the adoption of behavioural science among employees in future assessments. While the findings offer broad feedback initially, they will serve as a critical reference point for measuring the growth and maturation of this field over time. This baseline will also ensure that strategies remain aligned with the practical challenges faced by employees, facilitating ongoing improvements and adaptations.

6.0 RECOMMENDATIONS

i) **Enhance training programmes**
Develop comprehensive training sessions to improve understanding and application of behavioural science principles among employees.

ii) **Improve communication**
Create clear messaging to convey the benefits and relevance of behavioural science to all staff members.

iii) **Foster collaboration**
Encourage teamwork and knowledge sharing to build a culture that supports the integration of behavioural science.

iv) **Implement pilot projects**
Launch specific initiatives that demonstrate the practical impact of behavioural science in real-world scenarios to build interest and confidence.

v) **Establish feedback mechanisms**
Create systems for employees to provide input on behavioural initiatives, allowing for continuous improvement and adaptation.

These highlights and recommendations aim to strengthen the application of behavioural science within the MOH, ultimately enhancing health outcomes across Malaysia.

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