

Patient satisfaction and behavioural intention in using the home medication delivery service in an oncology centre



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Background

- The Medication Delivery Service (MDS) in Singapore has been around since 2015¹.
- It was not until the COVID-19 pandemic that there was a significant increase in uptake²
- Voluntary use of MDS can increase adherence to medications and result in improvement in clinical outcomes, especially for patients with chronic diseases.
- Despite the benefits, patients using MDS have experienced barriers such as the lack of face to face encounter with the pharmacist³ and unfamiliarity with the service⁴.
- To keep up with the sustained increase on reliance of MDS, there is a need to measure the satisfaction, as well as barriers and facilitators of patients and caregivers using MDS.
- Theory of Planned Behaviour (TPB) measures the relation of patient's intention and behaviour⁵.
- We hypothesise that current satisfaction of MDS is suboptimal due to existing barriers.

Objectives

- Investigate MDS **satisfaction** of patients and caregivers in National Cancer Centre Singapore (NCCS).
- Identify **barriers and facilitators** of MDS adoption, using the Theory of Planned Behaviour.
- Recommend improvements** to encourage patients and caregivers to adopt MDS.

Methods

Study Design: A cross-sectional study was carried out on patients in NCCS.
Participants: From a registry of patients who signed up for MDS in NCCS.

Survey:

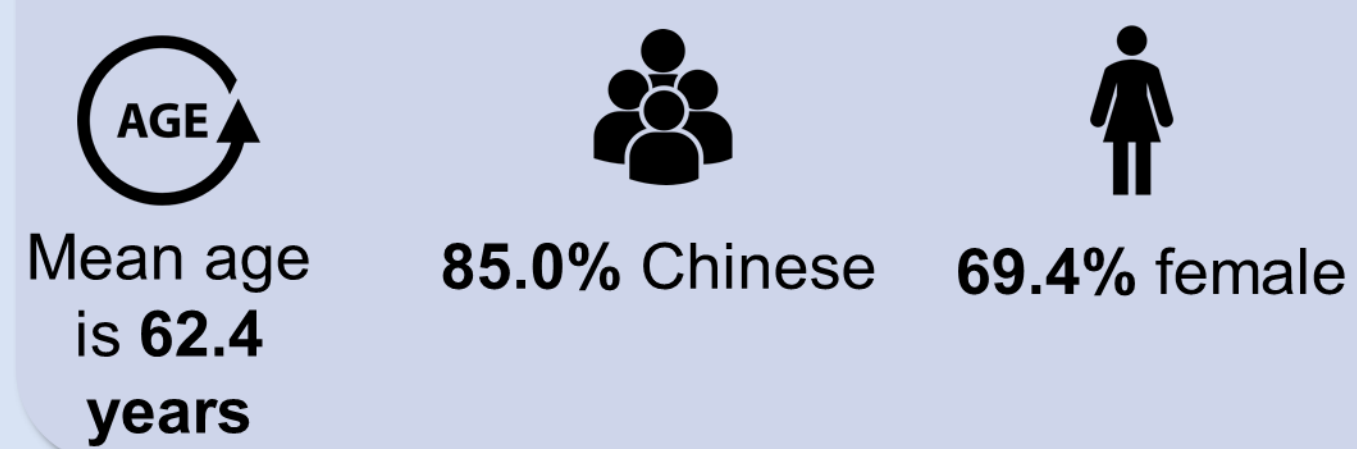
- Consisted of questions on demographics, satisfaction, TPB and free response.
- TPB domain of perceived behavioural control was used to identify facilitators and barriers.
- Attitude was used to identify advantages and disadvantages of using MDS.

Analysis:



Results and Discussions

Demographics



Characteristics

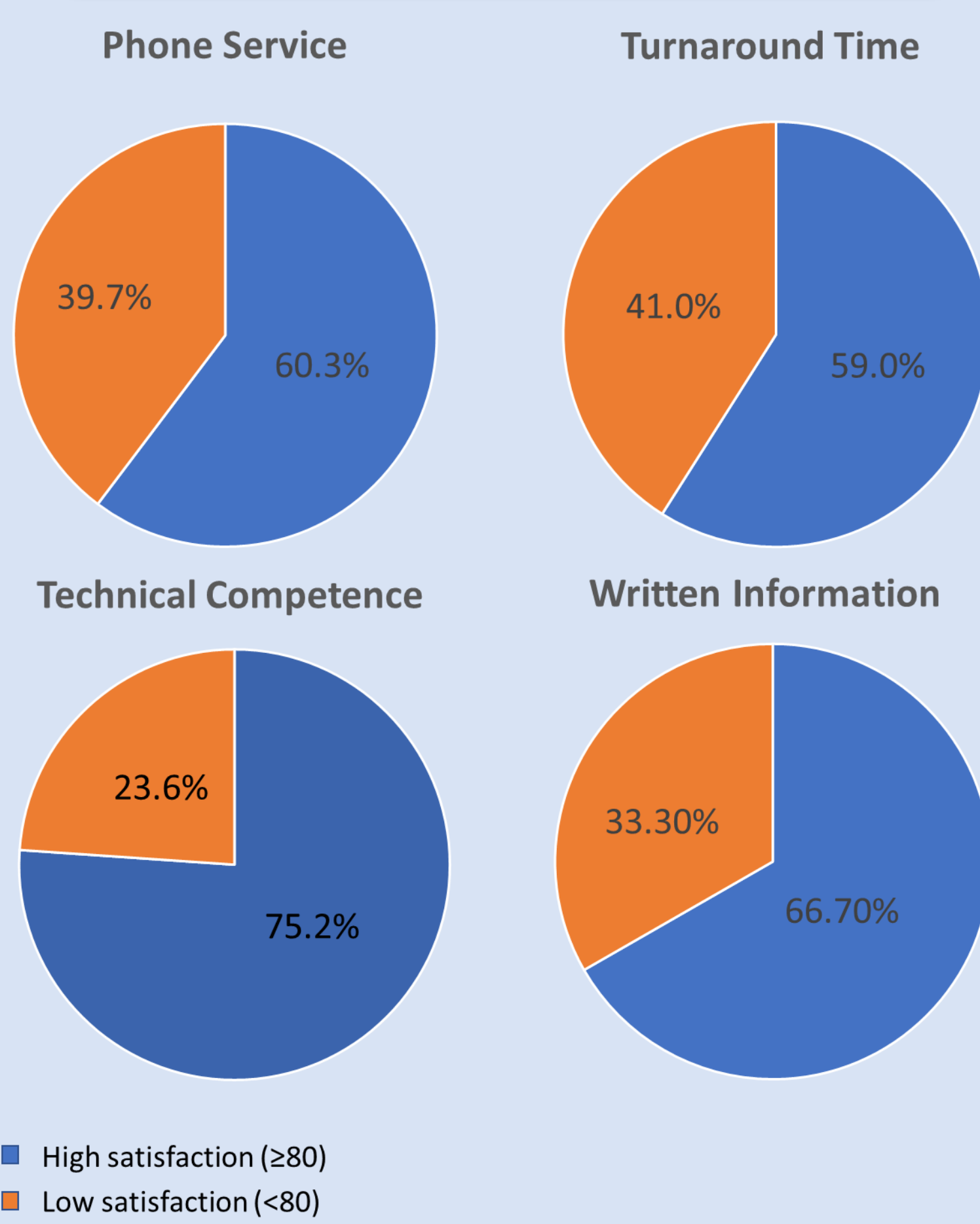
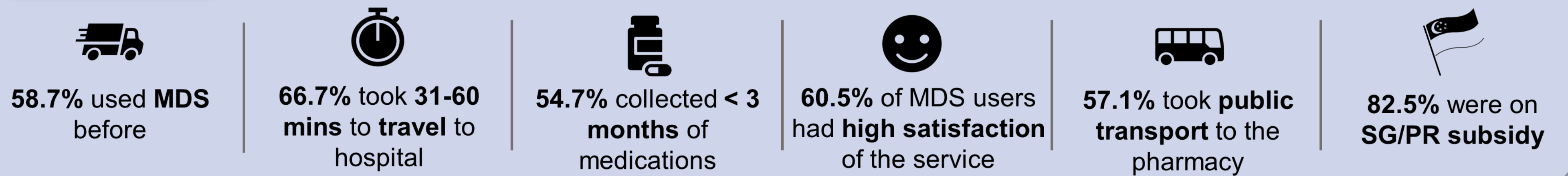


Figure 1: Proportion of high and low satisfaction across categories (n=517)

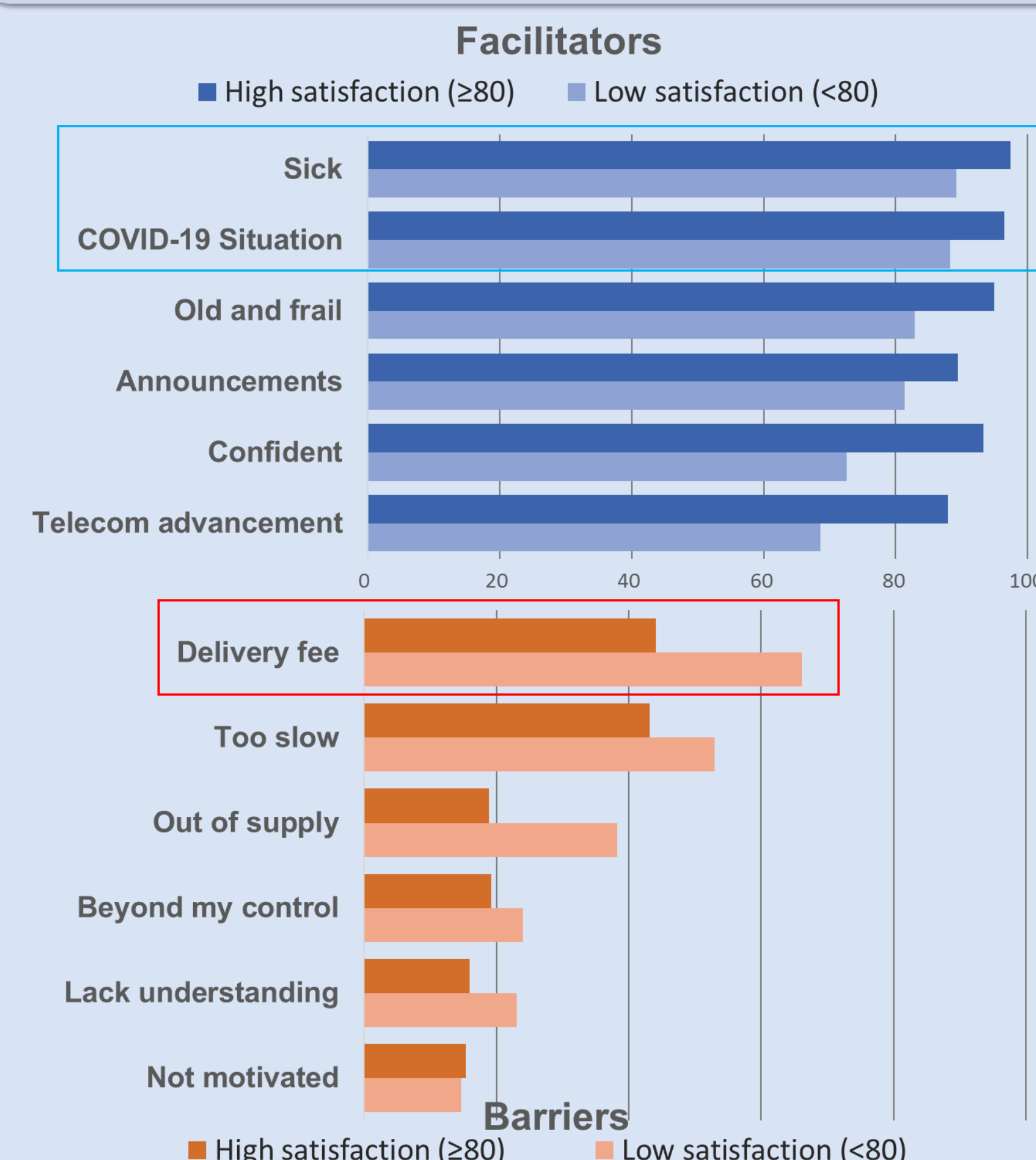


Figure 2: Agreement of facilitators and barriers of MDS between High Satisfaction (n=314) and Low satisfaction (n=203)

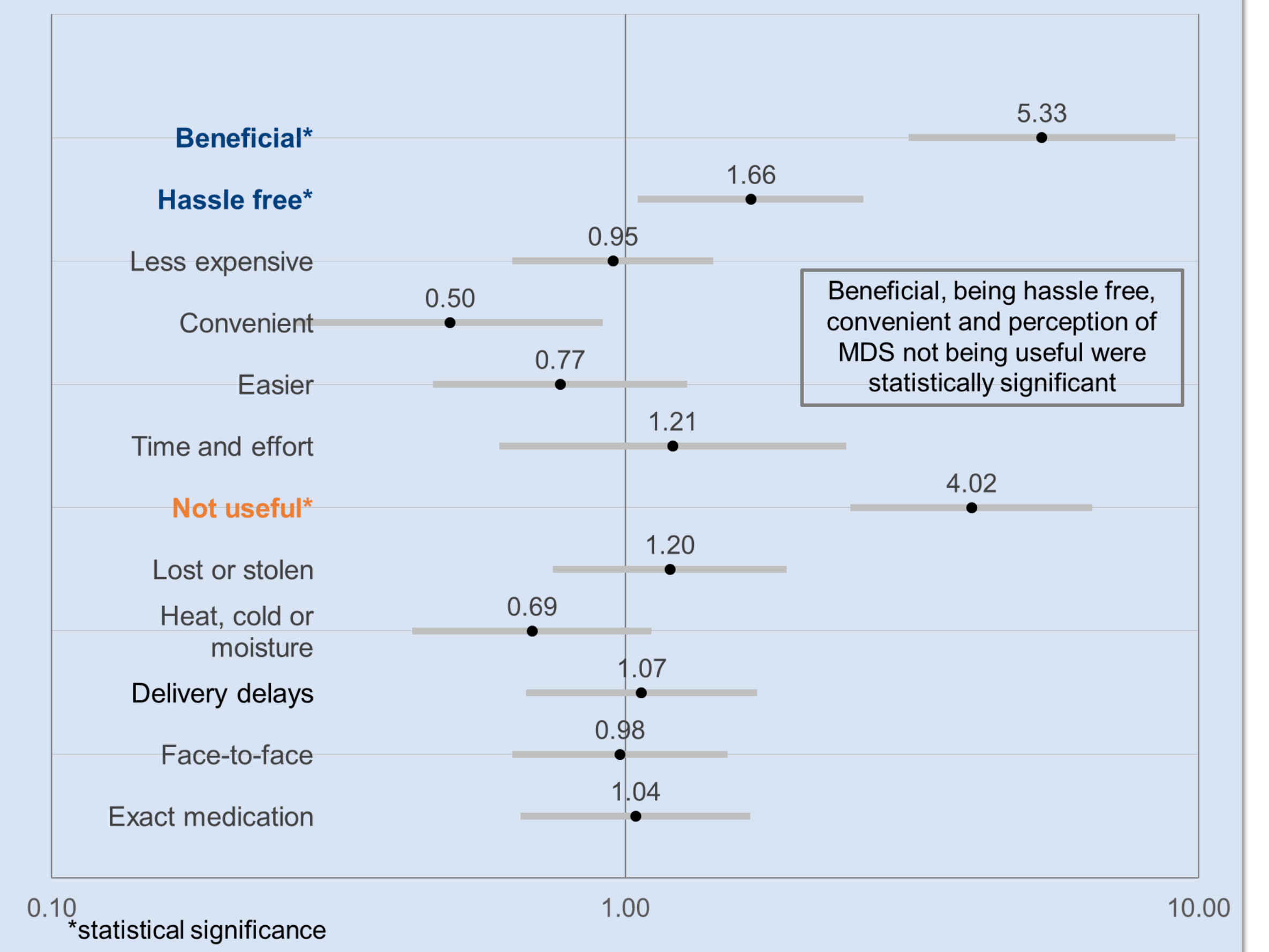


Figure 3: Odds ratio of attitude items with high satisfaction (n=517).

Findings

Satisfaction

- Participants were mostly satisfied with MDS, more than half had high satisfaction (60.5%).
- Participants were most satisfied with technical competence^a but least satisfied with turnaround time (figure 1).
- Delivery delays was significantly – participants concerned with delivery delays were less likely to feel satisfied with MDS.
- For phone service, participants were least satisfied on time spent with the pharmacist

^aTechnical competence includes confidence of pharmacy to prepares all medications correctly, reviewed and accuracy of the delivered medications.

Facilitators

- Participants felt that MDS was safer than collecting at the pharmacy when they were sick or during the COVID-19 pandemic (figure 2).

Barriers

- Participants with low satisfaction were found to have the most concerns with delivery fees (figure 2).
- In the free response, participants raised concerns of the cost and would reconsider MDS if the free delivery was removed.

Advantage/Disadvantage

- Advantage/disadvantage ($p < .001$) was found to be statistically significant using logistic regression analysis.
- Items on benefit, being hassle free and convenient were significant – a participant who perceived MDS as beneficial, hassle free and convenient would have a higher odd of high satisfaction with the service (figure 3).
- Participants who perceived that MDS as not useful to them had a higher odd of being less satisfied with the service (figure 3).

Recommendations

- Cost of service**
- Cost of delivery should be within reasonable range to encourage adoption of MDS.
 - Implementation of a delivery plan could help reduce cost and increase usage of service.

- Delivery time**
- Shorter intervals could be arranged between courier company and NCCS pharmacists.
 - Promote use of locker stations for collection.
 - Use of live tracking of parcel could keep patients in the loop for their delivery.

- Ease of accessibility**
- Appointment of support staff to help with the phone services.
 - More telephone lines within pharmacy to cater for the increased demand of MDS.
 - Promotion of Health Buddy app for making medication orders.

Limitations

- The survey on MDS was conducted in NCCS. Results from this study on MDS will not be generalisable to a larger context within Singapore.
- While the study was able to measure the satisfaction and behaviour of many of the patients who had used the service, the survey had left out a majority of non-MDS patients who were not part of the registry.

Conclusion

- Most participants were satisfied with MDS.
- More could be done to improve satisfaction on turnaround time and phone service.
- Barriers identified were delivery fees and the waiting time of the delivery.
- Recommendations were made on cost of the service, delivery time and ease of service.
- Findings from this paper would be useful in guiding future research and plans as adoption of MDS in Singapore is set to increase.