

The Interplay Between Strictness of Policies and Individuals' Self-Regulatory Efforts: Associations with Handwashing During the COVID-19 Pandemic

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INTRODUCTION

- Preventive behaviours such as handwashing has proven to be cost-effective in reducing COVID-19 morbidity ¹
- Containment and health policies ("policies") differed across countries in content and strictness during the COVID-19 pandemic
- The Health Action Process Approach (HAPA) model of behavior change helps predict individual preventive actions ²
- Aim:** Determine if the level of strictness of containment and health policies was related to handwashing adherence at follow-up via the HAPA model

METHODOLOGY

- From March 2020 to September 2020, participants 18 years and older from 14 countries completed an online survey (T1) and again 1 month after their initial submission (T3)

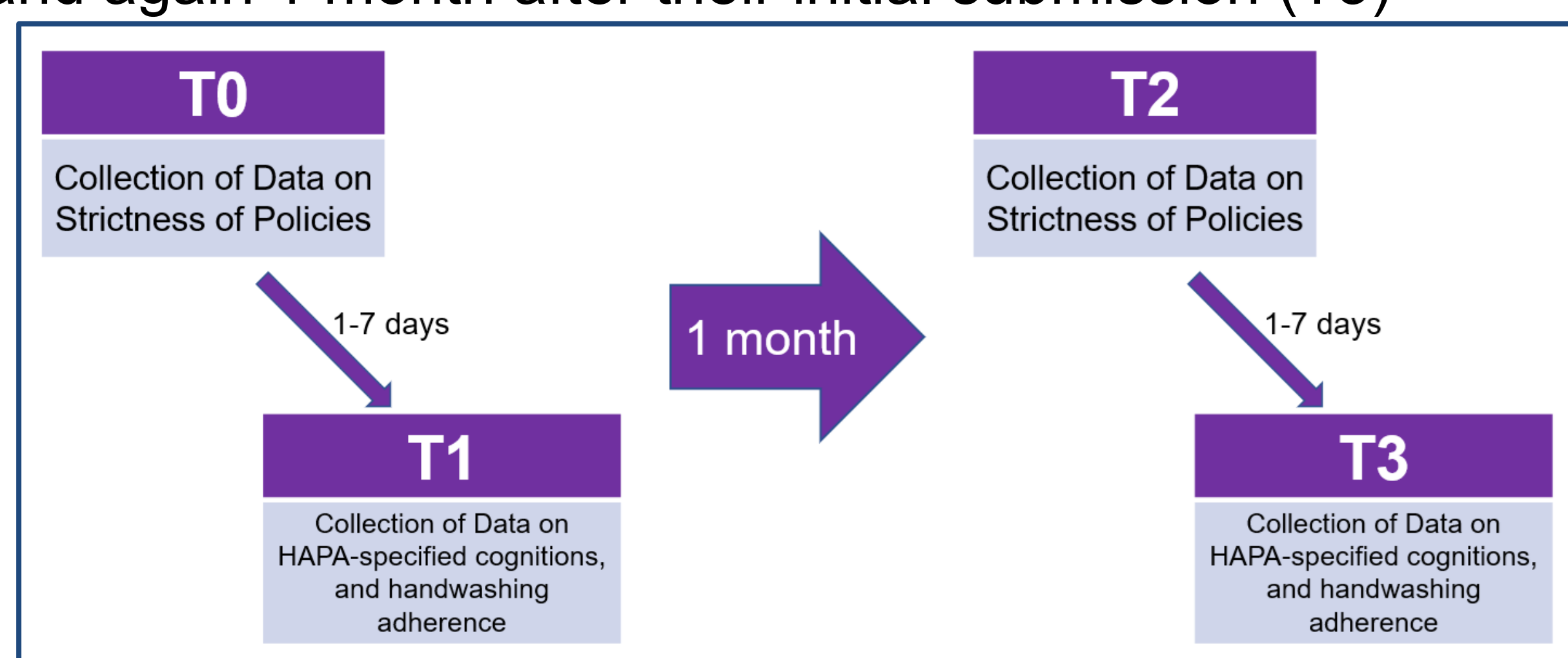


Figure 1: Study timeline from 25 March 2020 to 20 September 2020

- 28 questions sought to grade the strength of health beliefs ("HAPA variables") as well as to self-assess adherence to handwashing guidelines ("outcomes")

Risk perception				
Compared to an average person of your age and gender, what is your risk of coronavirus SARS-CoV-2 infection?				
Very low	Low	Moderate	High	Very High
☐	☐	☐	☐	☐
Outcome expectancies				
If I wash my hands frequently every day in accordance with the WHO recommendations, then I would be proud of myself that I take care of my health				
Strongly disagree	Disagree	Agree	Strongly agree	
☐	☐	☐	☐	

Figure 2: Sample questions used to assess HAPA variables and outcomes

- Data from the Oxford COVID-19 Government Response Tracker was collected over the study period and aggregated to quantify the strictness of policies and matched to each completed survey ³
- Path analysis with maximum likelihood estimation was used to determine direct and indirect effects between strictness of policy in the participant's country at that time, HAPA variables and outcomes

RESULTS

- Adherence to handwashing guidelines was consistently high across both surveys
- Strictness of policy was high but declined over time
- Correlations within HAPA variables were consistent with previous validation of the theory ²
- Both surveys indicated that high HAPA variables regarding risk perception, positive outcome expectancy and self-efficacy results in increased adherence to handwashing guidelines
- Stricter health policy had a small but significant negative direct correlation with HAPA variables at T1 and T3, along with indirect correlation with adherence to handwashing
- Overall, stricter containment and health policy led to poorer self-assessed handwashing adherence

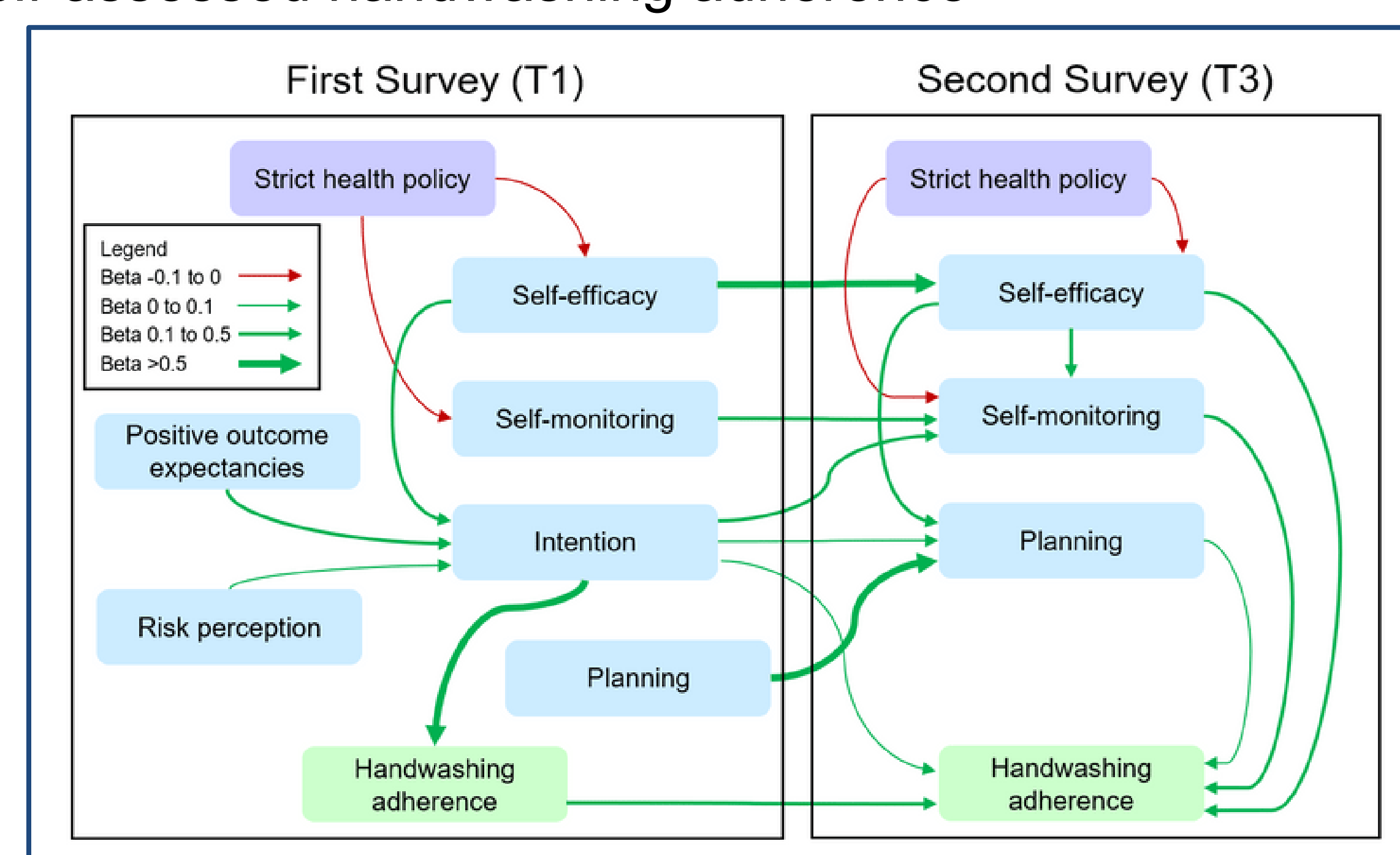


Figure 3: The direct effects between policies, HAPA variables, and outcomes derived from path analysis. Statistically significant effects are displayed. Strength of effect (Beta) is represented as thickness of arrows, with thicker arrows indicating a stronger correlation. Stricter health policy is associated with poorer HAPA variables of self-efficacy and self-monitoring. Higher HAPA variables are correlated positively with each other and is associated with better outcomes.

DISCUSSION

- This study suggests that stricter health policies impedes health outcomes by degrading individual's motivation and self-efficacy
- Several psychological theories can explain this, such as "ego-depletion" where adherence to stricter regulations comes at the expense of a reduced mental budget for health behaviours dependent on self-efficacy ⁴
- This disagrees with reactance theory where restrictive policies fail because individuals deliberately resist and undermine said policies ⁵
- Subsequent studies may collect objective data on health outcomes instead of using self-reported metrics and may study health policy outcomes outside of a pandemic context
- Future containment and health policy may consider that strictness of policy can have paradoxical effects on outcomes due to the impact on individual's self-regulation

CONCLUSION

- Stricter containment and health policies was related to poorer self-reported handwashing adherence during the COVID-19 pandemic
- Future policies can consider involving education and psychological interventions to assist individuals with self-regulation

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