

PAIN RELIEF AT ANY COST?

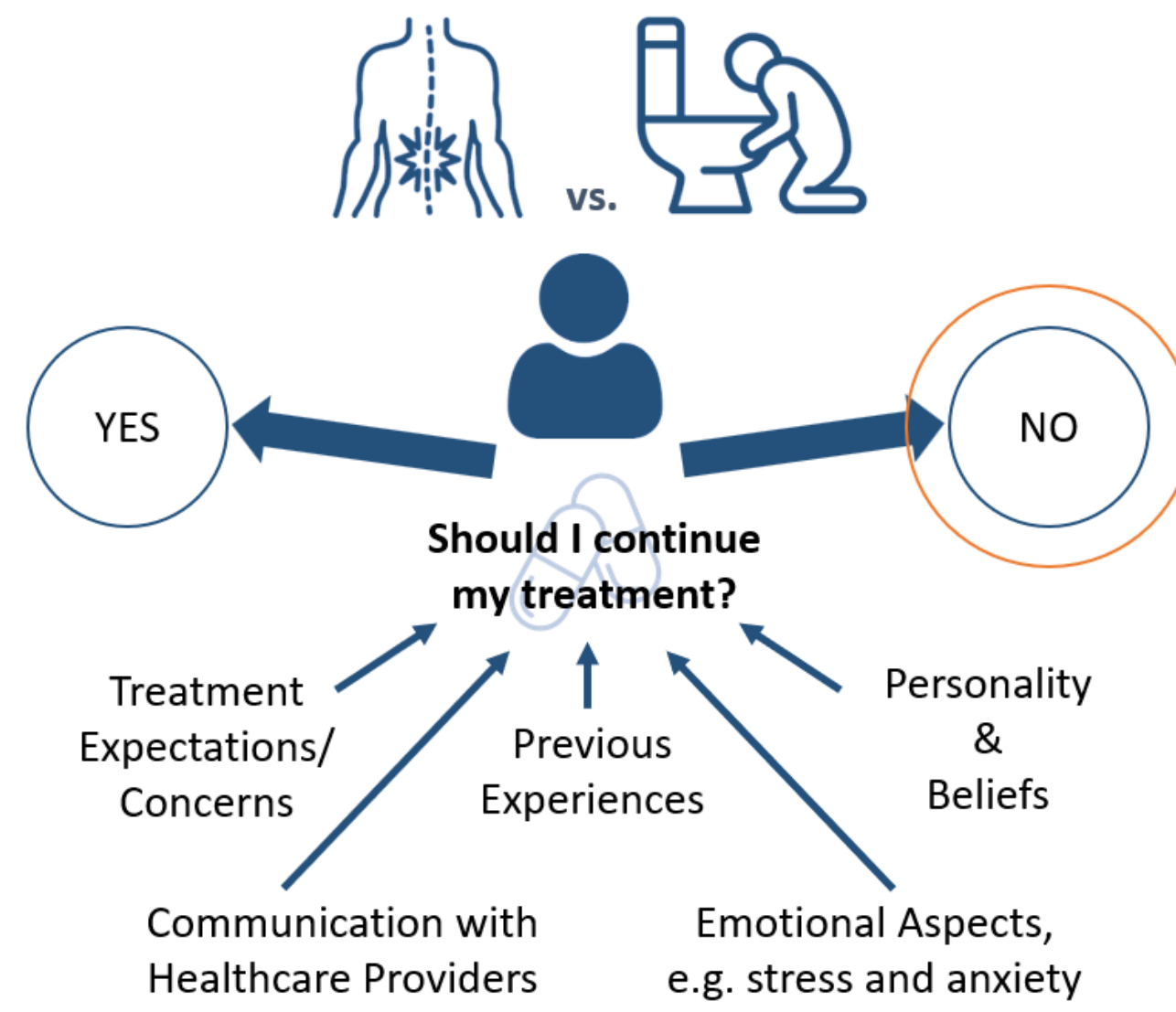
IMPACT OF EXPERIENCED SIDE EFFECTS ON SUBSEQUENT TREATMENT DECISIONS IN AN EXPERIMENTAL PAIN PARADIGM

INTRODUCTION

Treatment dilemma: Chronic pain treatments (e.g. NSAIDs, opioids, antidepressants) cause distressing side effects

- Fatigue
- Nausea
- Dizziness

Barrier to Adherence: Side effects, combined with patients' past experiences and expectations, frequently lead to reduced adherence or total discontinuation of treatment



Negative Outcomes:

- Persistent pain
- Worsened long-term prognosis
- Increased socioeconomic costs

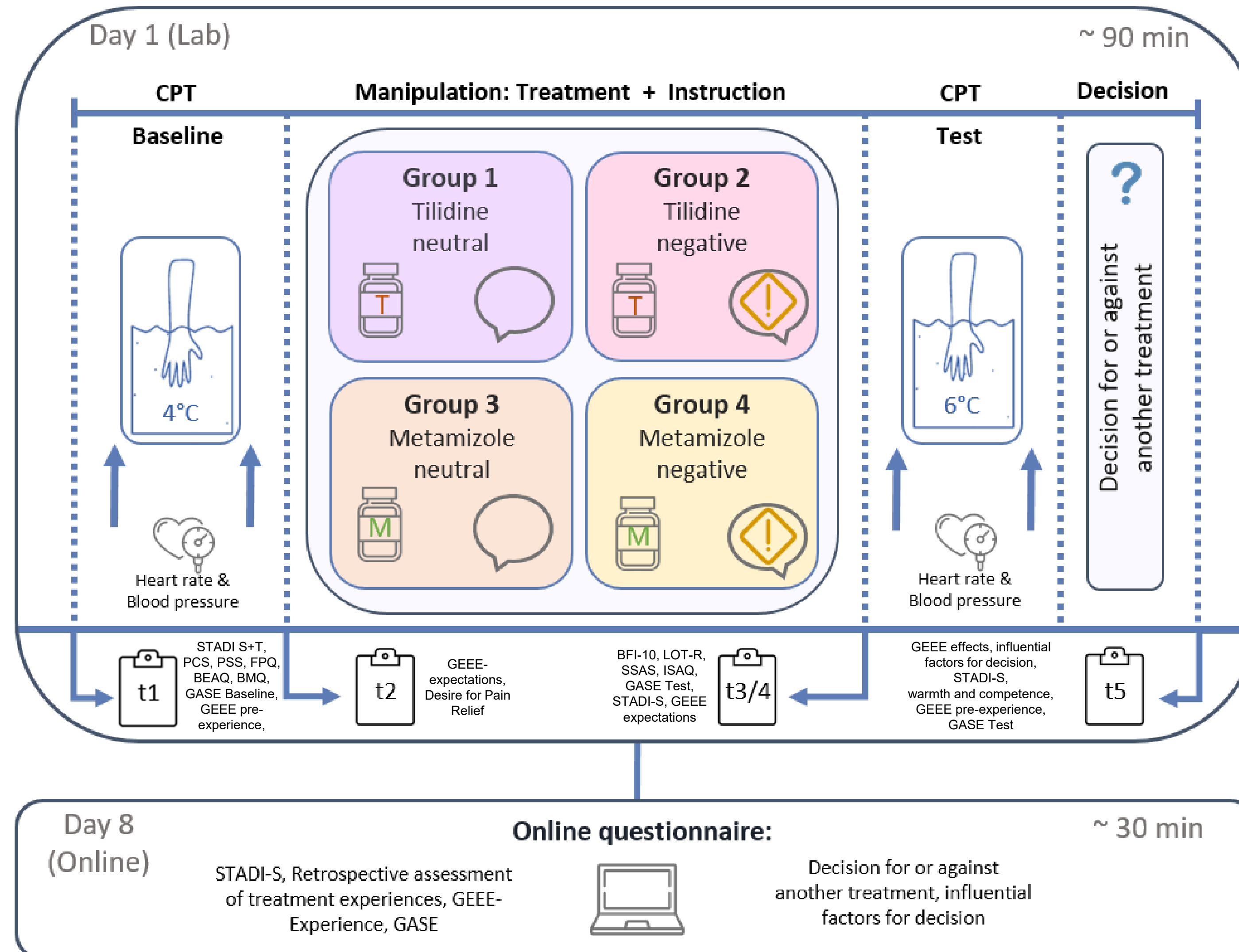
Study Goal: Understanding the emotional, cognitive, and motivational processes that drive patients to prioritize avoiding side effects over achieving symptom relief

Future Application: Developing more personalized treatment approaches based on the patients' personality structure, wishes and preferences

MATERIALS AND METHODS

Pain Induction – Cold Pressor Test

- Hand submerged into cold water bath for a maximum of 5 minutes
- Tonic pain stimulus
- Activates sympathetic nervous system
→ pain intensity & pain tolerance



Pharmacological Modulation

Tilidine Hydrochloride 50mg:

- Common acute side effects such as nausea, dizziness, headache and tiredness

Metamizole Sodium Nitrate 800mg:

- No acute side effects

→ Similar levels of pain relief

Expectation modulation - Verbal Instruction

Neutral:

- No emphasis on side effects
- Focus on analgesic effect
- Framing potential side effects as linked to analgesic mechanism

Negative:

- Emphasizing occurrence of side effects
- Stronger perceived threat of side effects

PRELIMINARY RESULTS

Participant Information

- Healthy participants, N = 148 (73 male, 75 female; age 18–43 years, M = 25.95, SD = 5.02)

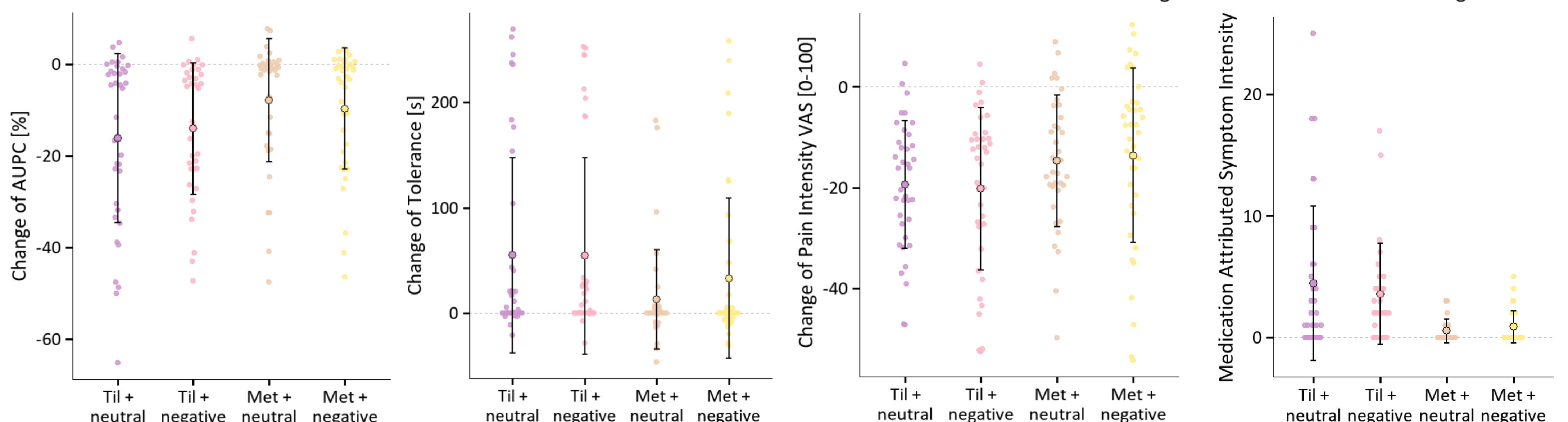
Manipulation Check

- Perceived analgesic efficacy did not differ between medication groups
- Significantly more side effects were reported in the tilidine groups
→ Results indicate that the manipulation functioned as intended

- No significant differences in reported pain or side effects between both instruction types

Main Outcome

- Treatment decision did not differ significantly between the experimental groups (probability and binary measure)



Direct comparison within each subgroup. Treatment Decision in percent is shown above. Illustrated are the percent area under the pain curve (%AUPC), the pain tolerance and a retrospective rating of pain intensity as measures of analgesic effects. Self-reported side effects are presented as medication-attributed symptom score. Filled dots indicate group means with standard deviations. Light dots show individual participant data.

OUTLOOK

Summary

- Central role of analgesic efficacy in treatment decision-making
- Role of influencing factors on treatment decision needs to be investigated
- Side effect experience, expectations, fear and concern as potential drivers of treatment decisions

Further Analyses

- Investigate reasons for treatment decisions
- Examine explicit factors influencing decision
- Assess influence of personality traits on perceived pain relief, side-effect intensity, and treatment choices
- Explore the role of treatment expectations
- Evaluate qualitative characteristics of side effects
- Analyze treatment decisions within a hypothetical clinical context and one week after initial decision

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