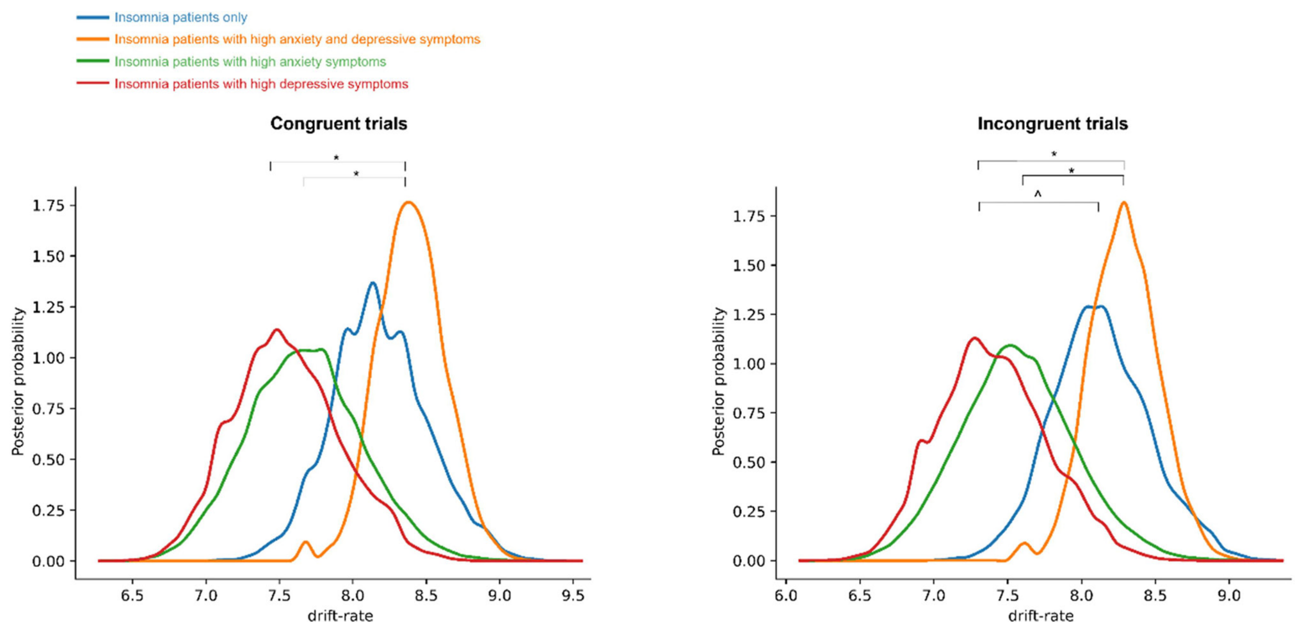

Abstract P36 Figure 1

applied to model drift rates during congruent (sleep-related) and incongruent (neutral) trials, with subgroup comparisons conducted via Bayesian estimation.

Results Across the cohort, faster drift rates in congruent versus incongruent trials (q = .036) confirmed sleep-related attentional bias. The IAD group exhibited significantly higher v than the ID group in both congruent (q = .035) and incongruent (q = .027) trials, and marginally higher v than the IA group (q = .061), reflecting generalised hyperarousal. Notably, ID group demonstrated a relative increase in v for incongruent over congruent trials (q = .064), indicative of disengagement from sleep-related stimuli. IO and IA groups showed intermediate patterns (figure 1).

Discussion Findings suggest distinct neurocognitive profiles across insomnia subtypes. Comorbid depression was associated with globally reduced evidence accumulation, consistent with attentional disengagement and cognitive hypoarousal. The combination of anxiety and depression yielded a hyperarousal signature with indiscriminate enhancement of attentional gain, potentially reflecting an agitated affective phenotype. Interestingly, IA showed slightly lower drift rates than IO, which may indicate attentional interference or fragmentation driven by internal preoccupation, rather than enhanced salience processing. These exploratory findings suggest disorder-specific attentional dynamics and heterogeneity of cognitive-affective processing in insomnia.

P37 BEHAVIOURAL TAGGING EFFECTS EMERGE AFTER A DELAY WITH OR WITHOUT SLEEP

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Introduction Learning that a particular category of images (e.g., animals) is associated with high reward not only strengthens memory for those images, but also enhances the consolidation of semantically related items encoded shortly before (Patil et al., 2017) – a phenomenon known as behavioural tagging. Considering that sleep facilitates the consolidation of high-reward memories (Sterpenich et al., 2021), we investigated whether behavioural tagging is enhanced by sleep.

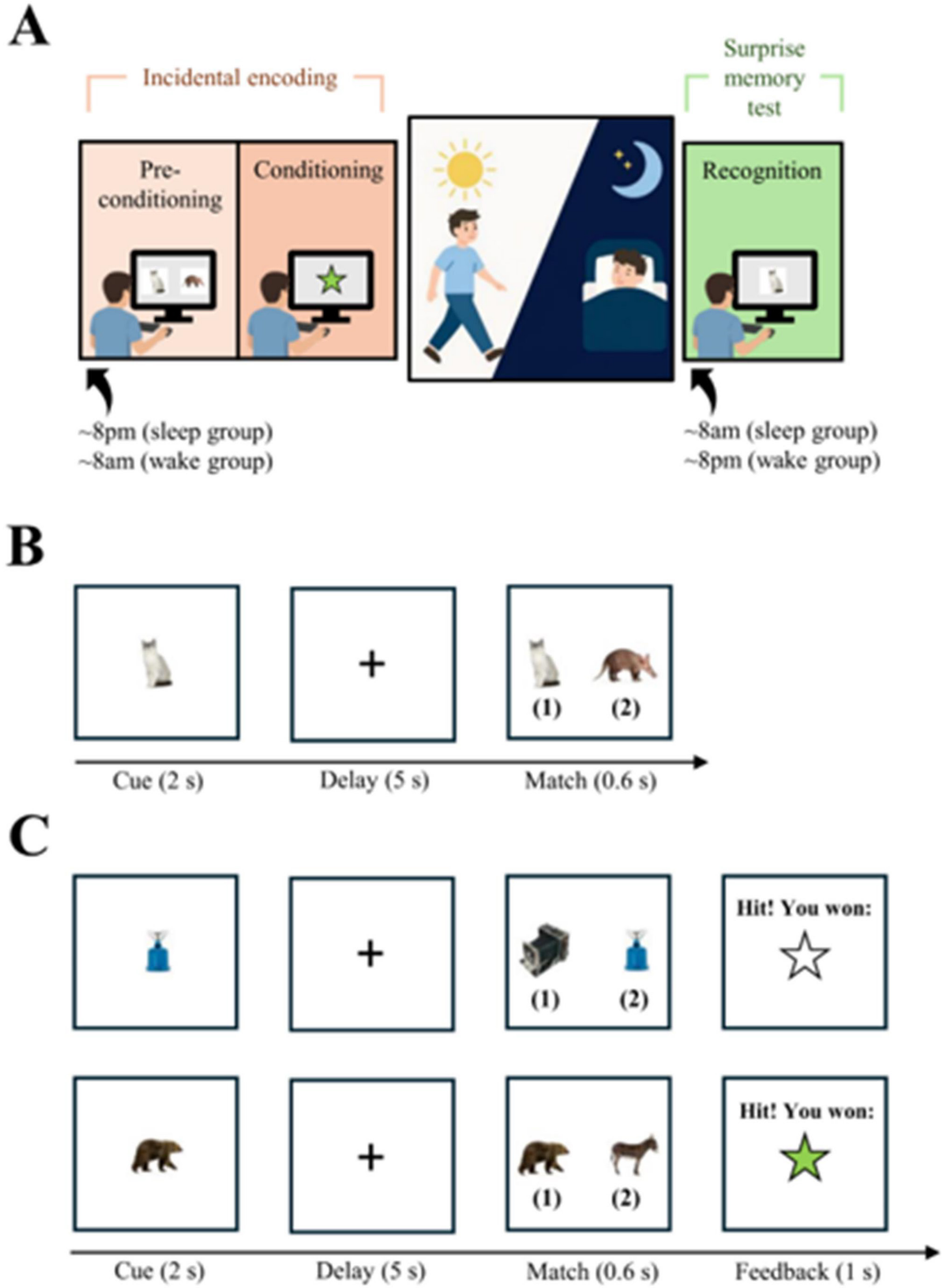
Methods In a pre-registered experiment, participants completed two in-lab sessions separated by a 12-hour delay of either overnight sleep (n=30, age: 20.57±0.58 years) or daytime wakefulness (n=29, age: 22.21±0.88 years; figure 1A). In Session 1, participants incidentally encoded images of animals and tools in two separate learning phases: a pre-conditioning phase, where neither category was associated with a reward (figure 1B), and a conditioning phase, where one category was associated with a high reward (£10) and the other with a low reward (£1; figure 1C). In Session 2, recognition memory was tested for all the images.

Results Recognition performance for images encoded in the pre-conditioning phase was better for images from the high-reward category (F=5.96, p=.018; figure 2A), replicating the behavioural tagging effect. This effect was absent in a separate control experiment in which memory was tested immediately after learning (F=0.27, p=.61; figure 2B), suggesting that behavioural tagging depends on post-encoding consolidation processes. Inconsistent with the hypothesis that sleep enhances behavioural tagging, the benefit of reward on memory was not enhanced by sleep (vs wakefulness; F=1.02, p=.32).

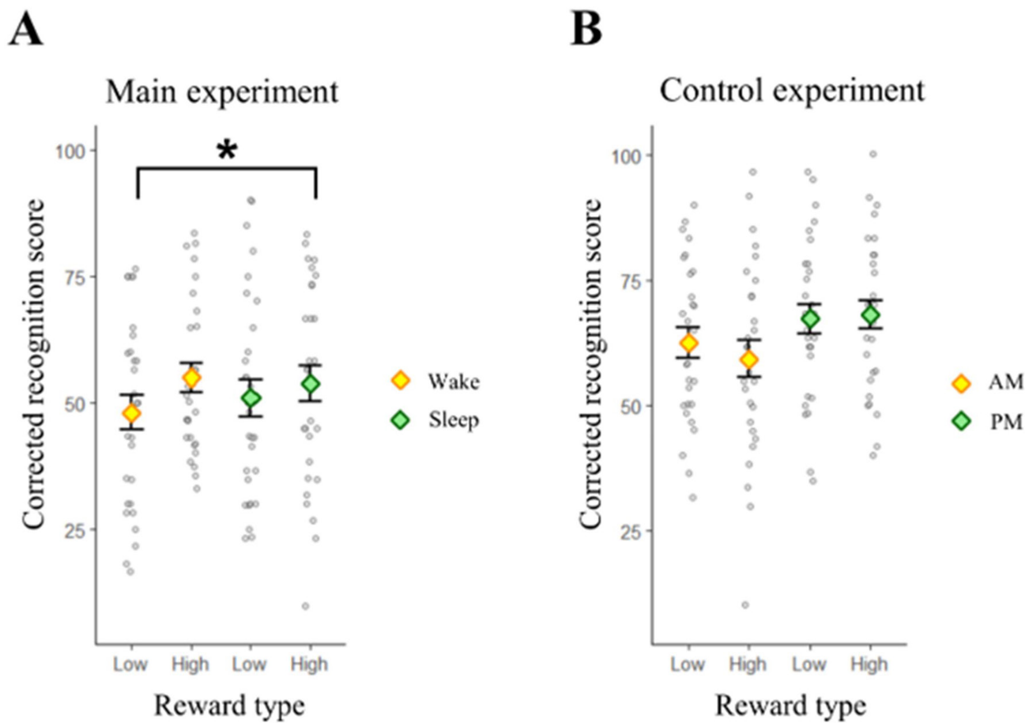
Discussion Our findings replicate the behavioural tagging effect, whereby reward retroactively enhances memory for semantically related items. This effect depended on a post-encoding consolidation process that was not sleep-specific, suggesting that salient memories can be stabilised during wakefulness.

REFERENCES

1. Patil, *et al*. (2017). *Learn. Mem.*
2. Sterpenich, *et al*. (2021). *Nature.*



Abstract P37 Figure 1 Experimental procedure. (A) In the main experiment, participants completed a learning session in either the morning or evening where images of tools and animals were incidentally encoded in two phases: a pre-conditioning phase and a conditioning phase. After a 12-h delay of overnight sleep or daytime wakefulness, participants returned for a surprise memory test



Abstract P37 Figure 2 Recognition performance for images encoded during the pre-conditioning phase. A) In the main experiment, memory was tested 12 hours after initial encoding. Recognition performance was significantly higher for pre-conditioning images from the category that was later associated with high reward, compared to those later associated with low reward, replicating the behavioural tagging effect. B) In a separate control experiment, memory was tested just 5 minutes after encoding. For images encoded in the pre-conditioning phase, no significant difference in recognition performance was observed between those later associated with a high reward and those later associated with a low reward, suggesting that the behavioural tagging effects seen in the main experiment depended on post-encoding consolidation processes

P38 EXPLORING HYPERSOMNOLENCE AND AFFECTIVE VALENCE RECOGNITION

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Introduction One aspect that has not been thoroughly investigated within Hypersomnolence and emotion literature is the recognition of affective valence. Lee et al. (2022) found that disrupted sleep can lead to slower recognition of affective valence, findings that are common within participants experiencing hypersomnolence (Filardi et al, 2021). The current work explores the relationship between hypersomnolence and affective valence.

Methods In all three studies, sleep measures were collected consistently using the ESS (Johns et al, 1991), SSS (Hoddes et al, 1973), PSQI (Buysse et al, 1989). Further details of each study are found below.

Study 1: Participants were shown images of different emotional valences. After a distractor task, participants were asked whether they recognised the image or not. Accuracy of recognition was recorded. Participant information for Study 1 is displayed in table 1.

Study 2: Utilised the STEU-B questionnaire to determine whether participants' emotional management was related to hypersomnolence. Participant information for Study 2 is displayed in table 2.

Abstract P38 Table 1 Demographic information for study 1

	N (%)	Mean Age (*SD*)	Age Range
N	93 *(100%)*	25.5 (7.08)	18-59
Male	15 (16.1%)	30.6 (10.88)	21-59
Female	77 (82.7%)	24.6 (5.73)	18-56
Non-Binary	1 (1%)	23	23

Abstract P38 Table 2 Demographic information for study 2

	N (%)	Mean Age (*SD*)	Age Range
N	106 (100%)	27.53 (*10.68*)	18-66
Male	21 (19.81%)	32.00 (*13.76*)	19-66
Female	83 (78.30%)	26.57 (*9.61*)	18-60
Non-Binary	2 (1.88%)	20.50 (*3.53*)	18-23