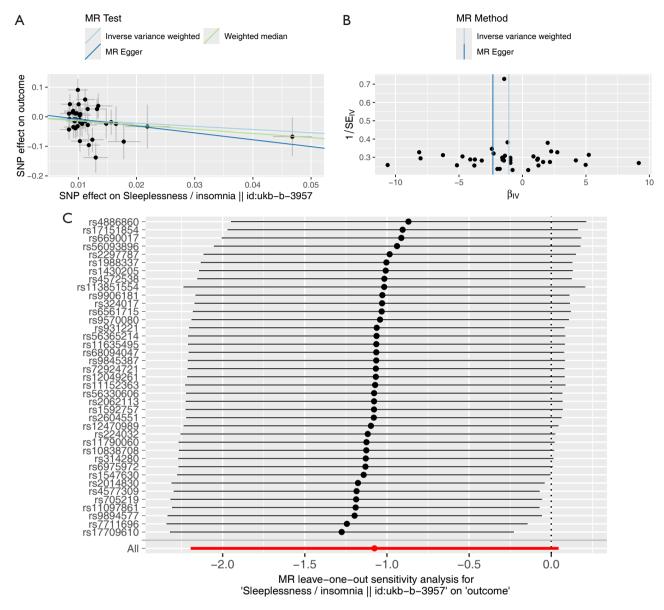
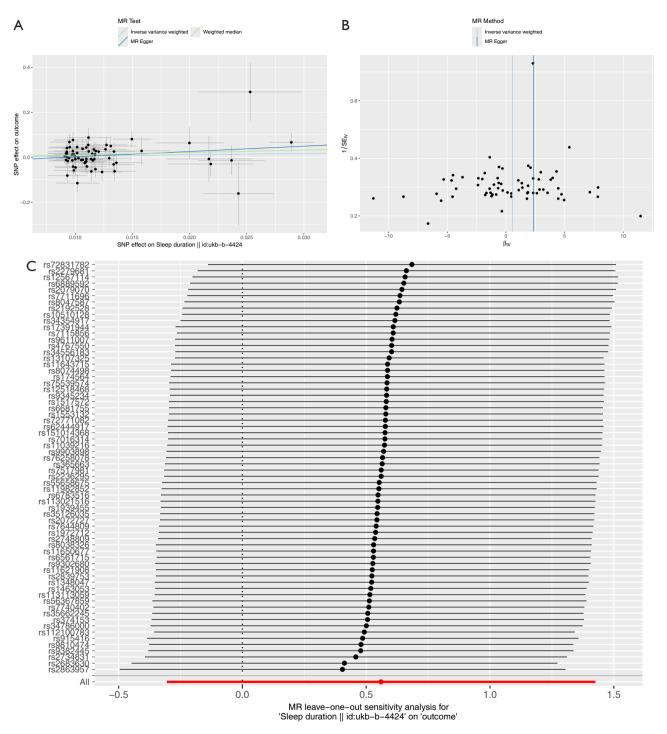
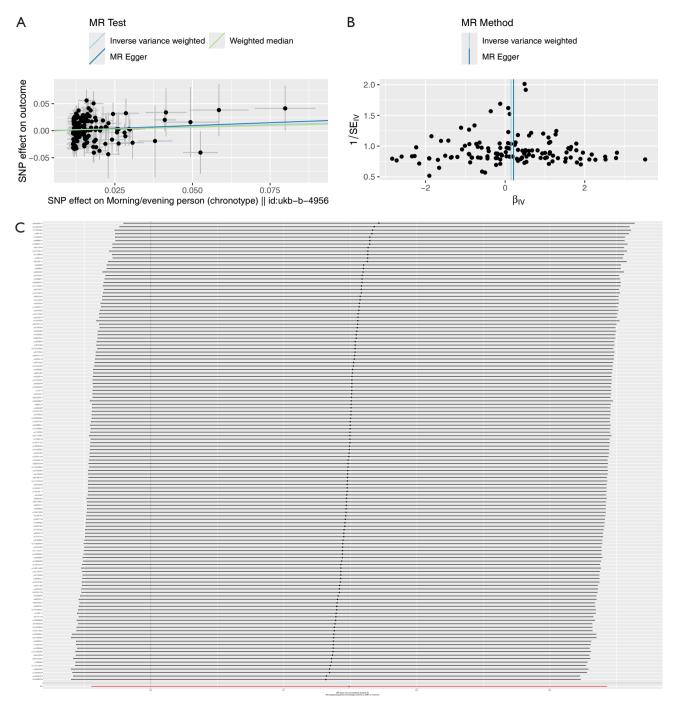
## Supplementary



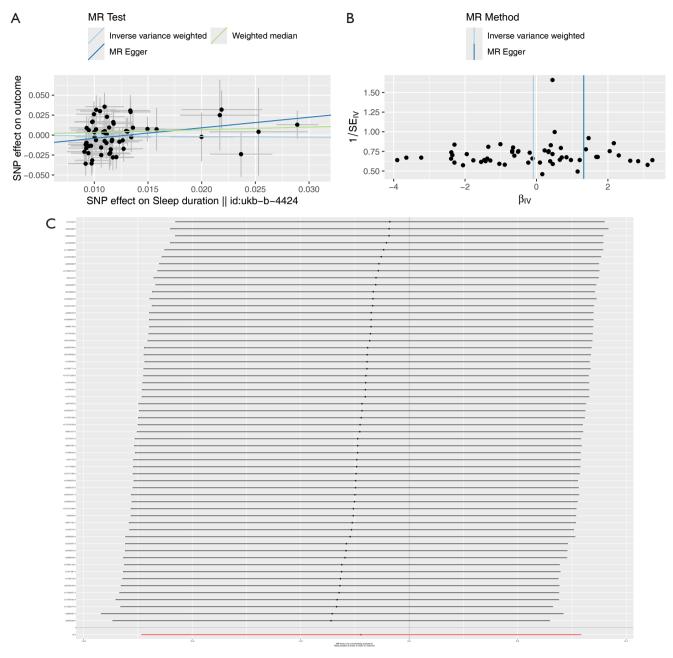
**Figure S1** MR analysis of insomnia on thyroid cancer. (A) Scatter plot estimating causal effects of insomnia on thyroid cancer. (B) Funnel plot estimating causal effects of insomnia on thyroid cancer. (C) Leave-one-out plots estimating causal effects of insomnia on thyroid cancer. MR, Mendelian randomization.



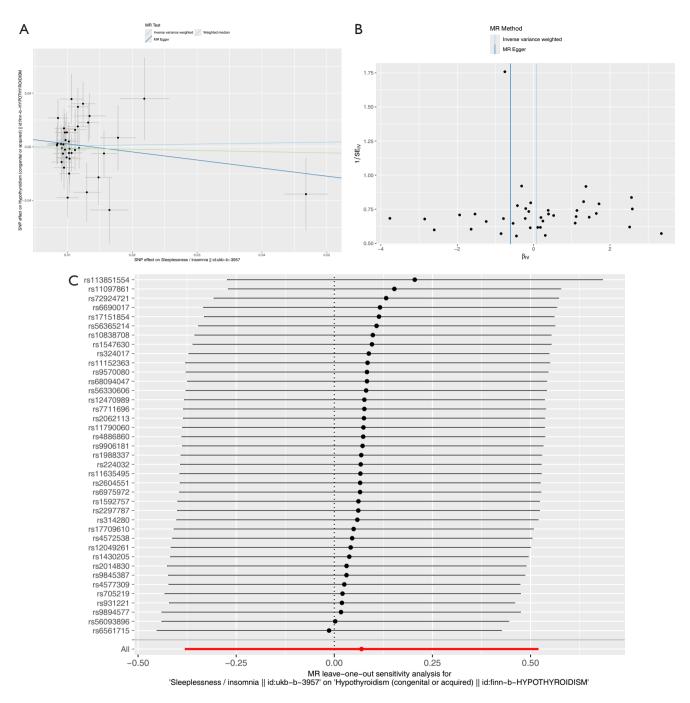
**Figure S2** MR analysis of chronotype on thyroid cancer. (A) Scatter plot estimating causal effects of chronotype on thyroid cancer. (B) Funnel plot estimating causal effects of chronotype on thyroid cancer. (C) Leave-one-out plots estimating causal effects of chronotype on thyroid cancer. MR, Mendelian randomization.



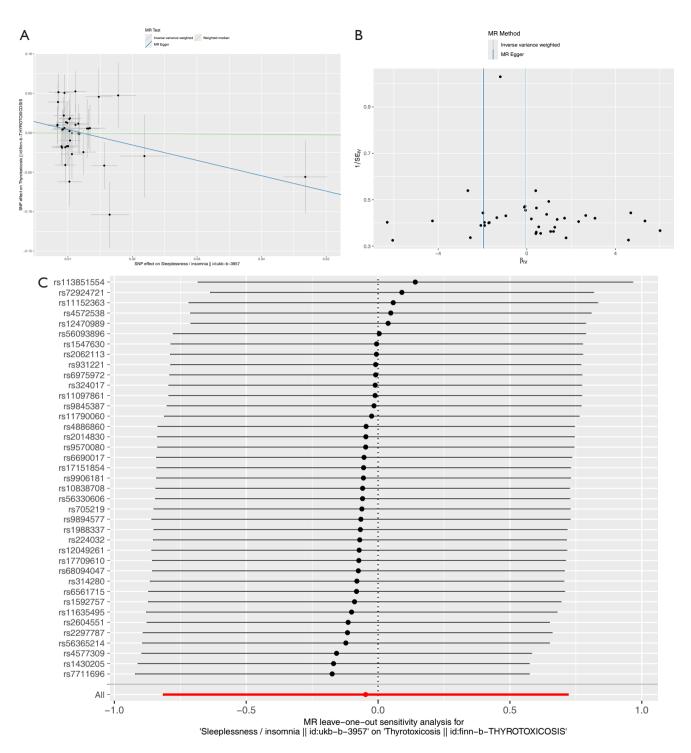
**Figure S3** MR analysis of chronotype on TNs. (A) Scatter plot estimating causal effects of chronotype on TNs. (B) Funnel plot estimating causal effects of chronotype on TNs. (C) Leave-one-out plots estimating causal effects of chronotype on TNs. MR, Mendelian randomization; TN, thyroid nodule.



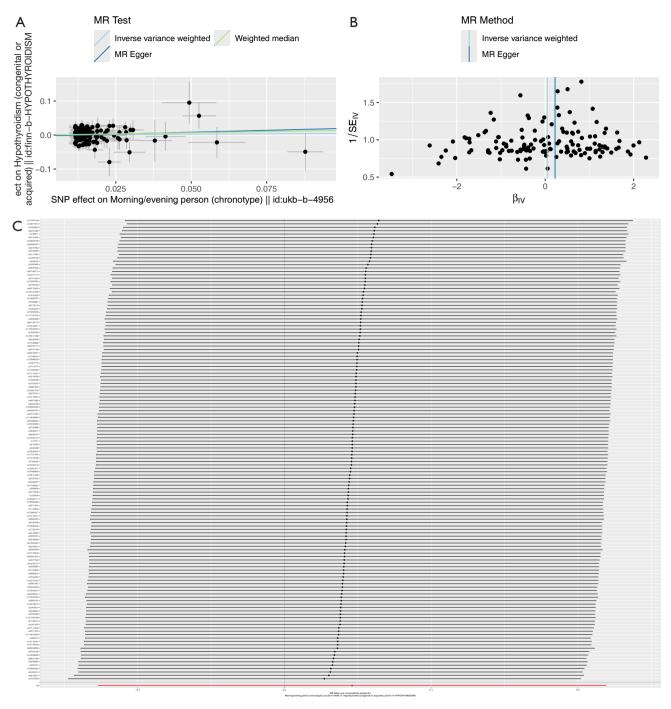
**Figure S4** MR analysis of sleep duration on TNs. (A) Scatter plot estimating causal effects of sleep duration on TNs. (B) Funnel plot estimating causal effects of sleep duration on TNs. (C) Leave-one-out plots estimating causal effects of sleep duration on TNs. MR, Mendelian randomization; TN, thyroid nodule.



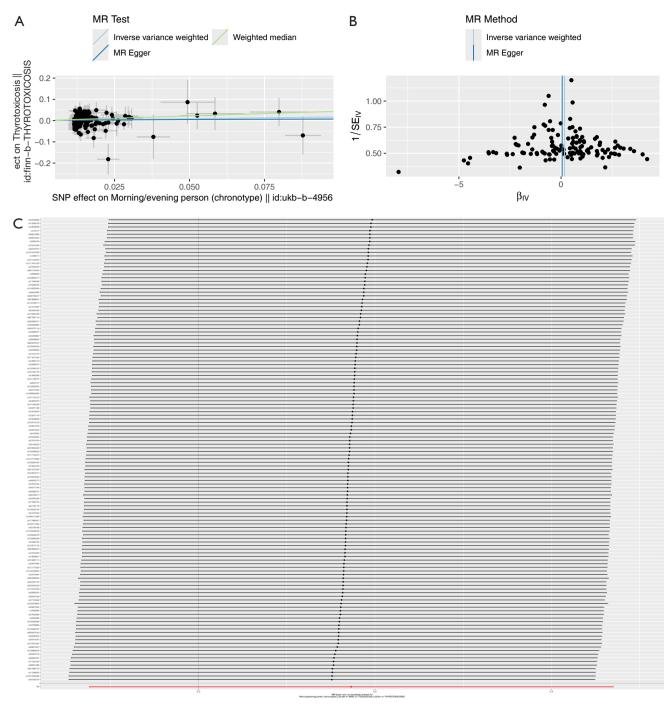
**Figure S5** MR analysis of insomnia on hypothyroidism. (A) Scatter plot estimating causal effects of insomnia on hypothyroidism. (B) Funnel plot estimating causal effects of insomnia on hypothyroidism. (C) Leave-one-out plots estimating causal effects of insomnia on hypothyroidism. MR, Mendelian randomization.



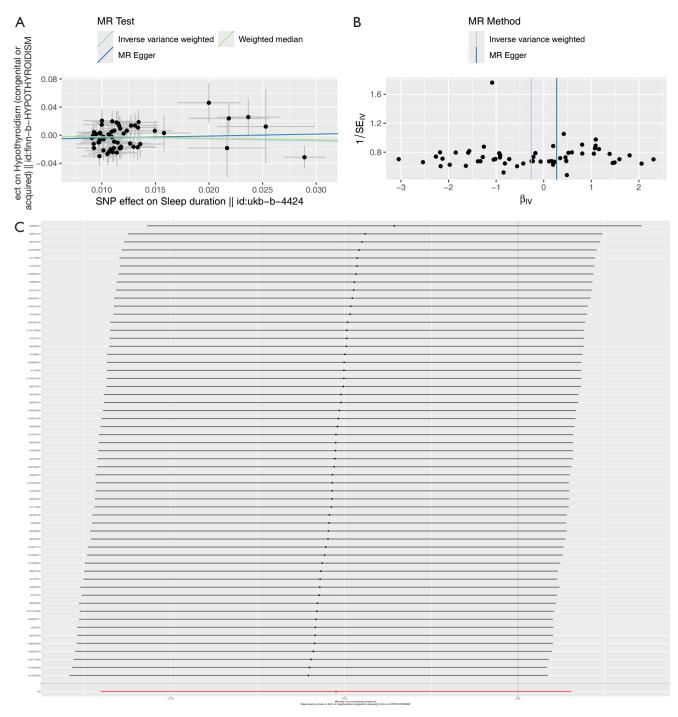
**Figure S6** MR analysis of insomnia on hyperthyroidism. (A) Scatter plot estimating causal effects of insomnia on hyperthyroidism. (B) Funnel plot estimating causal effects of insomnia on hyperthyroidism. (C) Leave-one-out plots estimating causal effects of insomnia on hyperthyroidism. MR, Mendelian randomization.



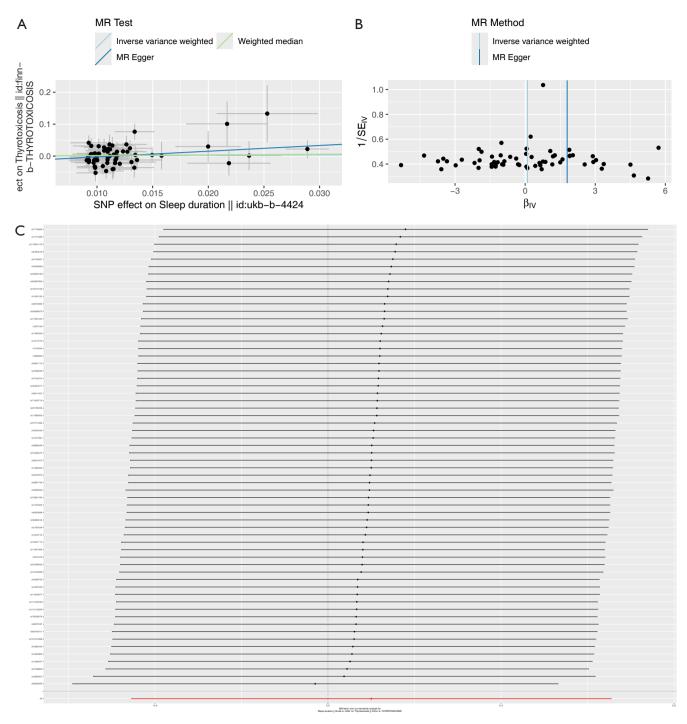
**Figure S7** MR analysis of chronotype on hypothyroidism. (A) Scatter plot estimating causal effects of chronotype on hypothyroidism. (B) Funnel plot estimating causal effects of chronotype on hypothyroidism. (C) Leave-one-out plots estimating causal effects of chronotype on hypothyroidism. MR, Mendelian randomization.



**Figure S8** MR analysis of chronotype on hyperthyroidism. (A) Scatter plot estimating causal effects of chronotype on hyperthyroidism. (B) Funnel plot estimating causal effects of chronotype on hyperthyroidism. (C) Leave-one-out plots estimating causal effects of chronotype on hyperthyroidism. MR, Mendelian randomization.



**Figure S9** MR analysis of sleep duration on hypothyroidism. (A) Scatter plot estimating causal effects of sleep duration on hypothyroidism. (B) Funnel plot estimating causal effects of sleep duration on hypothyroidism. (C) Leave-one-out plots estimating causal effects of sleep duration on hypothyroidism. MR, Mendelian randomization.



**Figure S10** MR analysis of sleep duration on hyperthyroidism. (A) Scatter plot estimating causal effects of sleep duration on hyperthyroidism. (B) Funnel plot estimating causal effects of sleep duration on hyperthyroidism. (C) Leave-one-out plots estimating causal effects of sleep duration on hyperthyroidism. MR, Mendelian randomization.