

**Variables and definitions:**

**Self-efficacy**

1. **Please tell us how confident you feel practicing the following behaviors in order to get better sleep: I can maintain healthy sleep habits.**

Not at all confident, somewhat confident, extremely confident

1. **Please tell us how confident you feel practicing the following behaviors in order to get better sleep: I can cut out screen use 1 hour before bed.**

Not at all confident, somewhat confident, extremely confident

1. **Please tell us how confident you feel practicing the following behaviors in order to get better sleep: I can exercise for 30 minutes total each day.**

Not at all confident, somewhat confident, extremely confident

1. **Please tell us how confident you feel practicing the following behaviors in order to get better sleep: I can participate in a breathing exercise during the day or before bed.**

Not at all confident, somewhat confident, extremely confident

*Coding for self-efficacy*

sleephygiene <- sleephygiene %>% mutate(

SELF\_EFFICACY = case\_when(

Q59\_canmaintainhealthysleephabits == "Extremely confident" ~ 1,

Q59\_canparticipateinbreathing == "Extremely confident" ~ 1,

Q59\_cancutoutscreen == "Extremely confident" ~ 1,

Q59\_canexercise == "Extremeley confident" ~ 1,

is.na(Q59\_canmaintainhealthysleephabits) ~ NA\_real\_,

is.na(Q59\_canparticipateinbreathing) ~ NA\_real\_,

is.na(Q59\_cancutoutscreen) ~ NA\_real\_,

is.na(Q59\_canexercise) ~ NA\_real\_,

TRUE ~ 0

)

)

**Attitude**

1. **Please rate your agreement with the following statements: Getting a good night’s sleep is important to me.**

Strongly disagree, somewhat disagree, neither agree nor disagree somewhat agree, strongly agree

1. **Please rate your agreement with the following statements: Having a regular sleep routine improves mental clarity/sharpness.**

Strongly disagree, somewhat disagree, neither agree nor disagree somewhat agree, strongly agree

Coding for attitude

sleephygiene <- sleephygiene %>% mutate(

ATTITUDE = case\_when(

Q44\_goodnightsleepisimportant == "Strongly agree" ~ 1,

is.na(Q44\_goodnightsleepisimportant) ~ NA\_real\_,

Q44\_mentalclarity == "Strongly agree" ~ 1,

is.na(Q44\_mentalclarity) ~ NA\_real\_,

TRUE ~ 0

)

)

**Emotions**

1. **Please rate your agreement with the following statements: I feel positive about the quality of my sleep.**

Strongly disagree, somewhat disagree, neither agree nor disagree somewhat agree, strongly agree

*Coding for emotions*

sleephygiene <- sleephygiene %>% mutate(

EMOTIONS = case\_when(

Q44\_feelpositive == "Strongly agree" ~ 1,

is.na(Q44\_feelpositive) ~ NA\_real\_,

TRUE ~ 0

)

)

**Cue to action – no good question to evaluate**

**Motivation**

1. **Please rate your agreement with the following statements: I think cutting out screen use 1 hour before bed leads to better sleep.**

Strongly disagree, somewhat disagree, neither agree nor disagree somewhat agree, strongly agree

1. **Please rate your agreement with the following statements: I think exercising regularly leads to better sleep.**

Strongly disagree, somewhat disagree, neither agree nor disagree somewhat agree, strongly agree

1. **Please rate your agreement with the following statements: I think participating in breathing exercises during the day or before bed leads to better sleep.**

Strongly disagree, somewhat disagree, neither agree nor disagree somewhat agree, strongly agree

*Coding for motivation*

mutate(MOTIVATION = case\_when(

Q44\_cuttingoutscreenleadstobettersleep == "Strongly agree" ~ 1,

Q44\_exercisingleadstobettersleep == "Strongly agree" ~ 1,

Q44\_breathingexercisesleadstobettersleep == "Strongly agree" ~ 1,

is.na(Q44\_cuttingoutscreenleadstobettersleep) ~ NA\_real\_,

is.na(Q44\_exercisingleadstobettersleep) ~ NA\_real\_,

is.na(Q44\_breathingexercisesleadstobettersleep) ~ NA\_real\_,

TRUE ~ 0

))

**Intention to perform**

1. **Please rate your agreement with the following statements: In the next two weeks, I will stop using screens 1 hour before bed for better sleep.**

Strongly disagree, somewhat disagree, neither agree nor disagree somewhat agree, strongly agree

1. **Please rate your agreement with the following statements: In the next two weeks, I will exercise for at least 30 minutes total each day for better sleep.**

Strongly disagree, somewhat disagree, neither agree nor disagree somewhat agree, strongly agree

1. **Please rate your agreement with the following statements: In the next two weeks, I will do a daily breathing exercise for better sleep.**

Strongly disagree, somewhat disagree, neither agree nor disagree somewhat agree, strongly agree

*Coding for intention*

sleephygiene <- sleephygiene %>% mutate(

INTENTION = case\_when(

Q44\_iwillstopscreens == "Strongly agree" ~ 1,

is.na(Q44\_iwillstopscreens) ~ NA\_real\_,

Q44\_iwillbreathe == "Strongly agree" ~ 1,

is.na(Q44\_iwillbreathe) ~ NA\_real\_,

Q44\_iwillexercise == "Strongly agree" ~ 1,

is.na(Q44\_iwillexercise) ~ NA\_real\_,

TRUE ~ 0

)

)

**Behaviors**

1. **Please rate your agreement with the following statements: In the next two weeks, I will do a daily breathing exercise for better sleep.**

Does response (days of doing activites)

*UPPER 75%ile exposure*

sleephygiene <- sleephygiene %>% mutate(

UPPERPERCENTILEexposure = case\_when(

pointscombinedperdays >= 15 ~ 1,

is.na(pointscombinedperdays) ~ NA\_real\_,

TRUE ~ 0

)

)

*Two categories (low to mid exposure vs. high exposure) – to evaluate dose response*

mutate(

UPPERPERCENTILEexposure\_categories = case\_when(

pointscombinedperdays >= 15 ~ 2,

pointscombinedperdays < 15 ~ 1,

is.na(pointscombinedperdays) ~ NA\_real\_,

TRUE ~ 0

)

)

**Overall health outcomes: improved sleep**

1. **Are you happy with your sleep quality overall currently?**

Yes or no

1. **Please rate your sleep quality from the following options: In the last two weeks? (on average)**

Poor, fair, good, excellent

*Coding for outcome*

mutate(happywithsleepqualitycombined = case\_when(

Q90\_areyouhappywithyoursleepquality\_awareofcampaign == "Yes" ~ 1,

Q90\_areyouhappywithyoursleepquality\_awareofcampaign == "No" ~ 0,

Q91\_areyouhappywithyoursleepquality\_notawareofcampaign == "Yes" ~ 1,

Q91\_areyouhappywithyoursleepquality\_notawareofcampaign == "No" ~ 0,

Q89\_ratesleepquality\_notawareofcampaign == "Good" ~ 1,

Q89\_ratesleepquality\_notawareofcampaign == "Excellent" ~ 1,

Q89\_ratesleepquality\_notawareofcampaign == "Poor" ~ 0,

Q89\_ratesleepquality\_notawareofcampaign == "Fair" ~ 0,

))

**Exposure to the campaign**

**Exposure definitions:**

Correctly identifying each picture belonging to the campaign correctly identified

(maximum 4 points)

Engagement with the campaign

(maximum 1 point)

Points for each day that participants reported moving at least 30 minutes in the last 14 days

(maximum 14 points)

Points for each day that participants reported using a breathing exercise  in the last 14 days

(maximum 14 points)

Points for each day that participants reported powering down devices at least 1 hour before bedtime in the last 14 days (maximum 14 points)

*Coding*

*mutate(Q67\_1 = case\_when(*

*is.na(Q67\_1) ~ 0,*

*TRUE ~ as.numeric(Q67\_1)*

*)) %>%*

*mutate(Q67\_2 = case\_when(*

*is.na(Q67\_2) ~ 0,*

*TRUE ~ as.numeric(Q67\_2)*

*)) %>%*

*mutate(Q67\_3 = case\_when(*

*is.na(Q67\_3) ~ 0,*

*TRUE ~ as.numeric(Q67\_3)*

*)) %>%*

*mutate(pointscombinedperdays = Q67\_1 + Q67\_2 + Q67\_3) %>%*

*mutate(ratesleepqualitycombined = case\_when(*

*Q89\_ratesleepquality\_notawareofcampaign == "Good" ~ 1,*

*Q89\_ratesleepquality\_notawareofcampaign == "Excellent" ~ 1,*

*Q89\_ratesleepquality\_notawareofcampaign == "Poor" ~ 0,*

*Q89\_ratesleepquality\_notawareofcampaign == "Fair" ~ 0,*

*)) %>%*

*mutate(POINTSFROMPICS1 = case\_when(*

*Q96\_picture2 == "Yes" ~ 1,*

*TRUE ~ 0*

*)) %>%*

*mutate(POINTSFROMPICS2 = case\_when(*

*Q96\_picture4 == "Yes" ~ 1,*

*TRUE ~ 0*

*)) %>% mutate(POINTSFROMPICS3 = case\_when(*

*Q96\_picture5 == "Yes" ~ 1,*

*TRUE ~ 0*

*)) %>% mutate(POINTSFROMPICS4 = case\_when(*

*Q96\_picture7 == "Yes" ~ 1,*

*TRUE ~ 0*

*)) %>% mutate(POINTFROMENGAGEMENT = case\_when(*

*Q69\_didyouengagewiththecampaign == "Yes" ~ 1,*

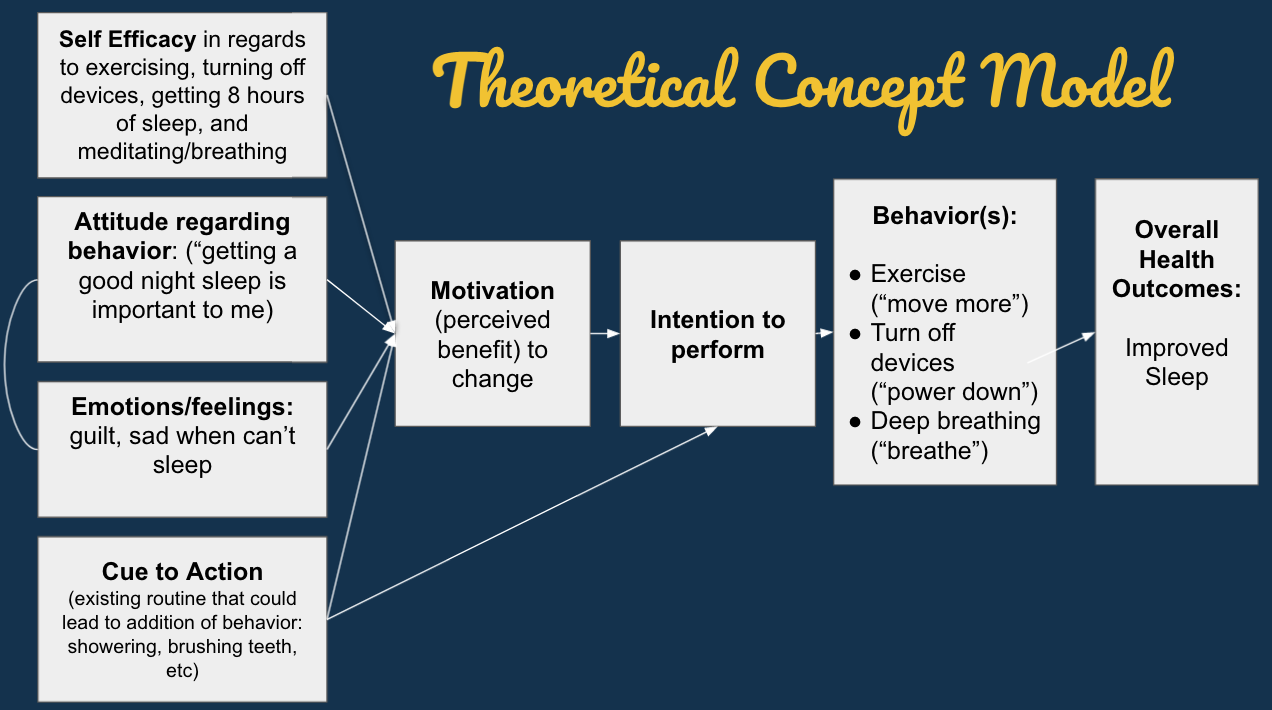
*TRUE ~ 0*

*)) %>% mutate(*

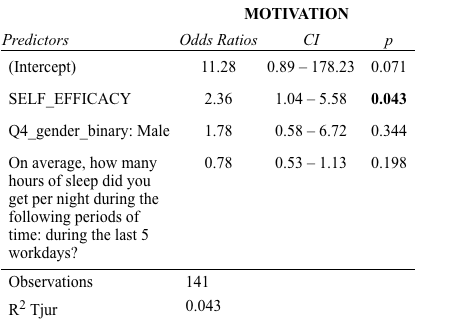
*POINTSFROMPARTICIPATION = X.MoveMore + X.PowerDown + X.Breathe*

*) %>%*

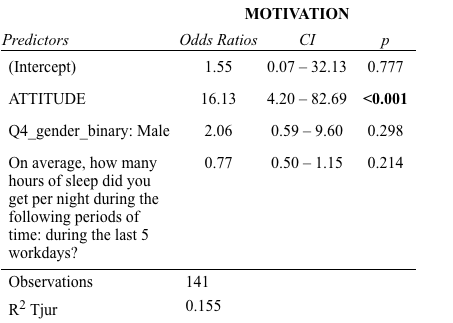
*mutate(TOTALPOINTS = pointscombinedperdays + POINTSFROMPICS1 + POINTSFROMPICS2 + POINTSFROMPICS3 + POINTSFROMPICS4 + POINTFROMENGAGEMENT + POINTSFROMPARTICIPATION)*



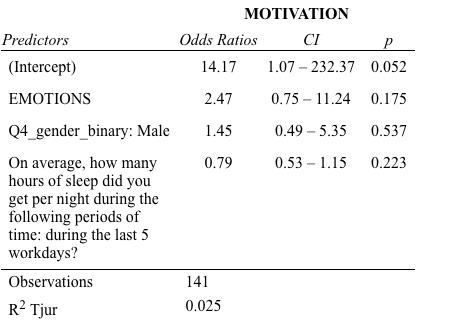
**Self-efficacy related to motivation**



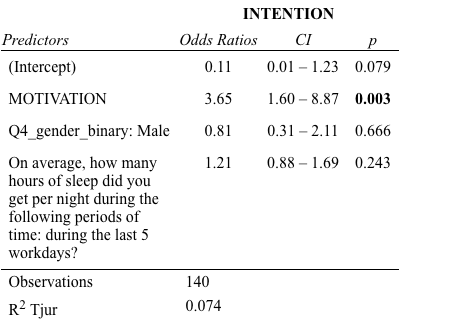
**Attitude related to motivation**

****

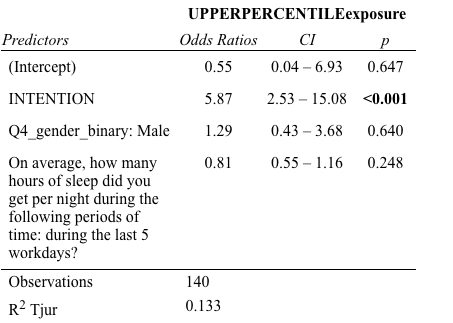
**Emotions/feelings related to motivation**

****

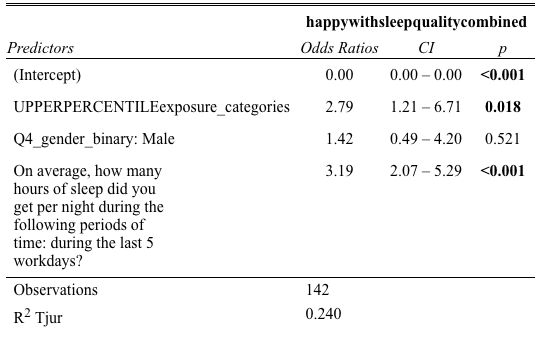
**Motivation related to intention**

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**Intention related to high exposure (defined as >75%ile of days performing activities [15 days cumulative])**

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**High exposure (defined as >75%ile of days performing activities [15 days cumulative]) vs. mid to low exposure < 15 days related to being happy with sleep**

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**Exposure to the campaign**

-Correctly identifying each picture belonging to the campaign correctly identified (maximum 4 points);

-Engagement with the campaign (maximum 1 point);

-Points for each day that participants reported moving at least 30 minutes in the last 14 days(maximum 14 points)

-Points for each day that participants reported using a breathing exercise  in the last 14 days (maximum 14 points)

-Points for each day that participants reported powering down devices at least 1 hour before bedtime in the last 14 days (maximum 14 points)

