Analisis.R

jdl

2024-08-13

```
# Cargar paquetes----
library(car)
```

```
## Loading required package: carData
```

```
library(ggstats)
library(tidyverse)
```

```
## -- Attaching core tidyverse packages ------------------------ tidyverse 2.0.0 --
## v dplyr     1.1.4     v readr     2.1.5
## v forcats   1.0.0     v stringr   1.5.1
## v ggplot2   3.5.1     v tibble    3.2.1
## v lubridate 1.9.3     v tidyr     1.3.1
## v purrr     1.0.2
```

```
## -- Conflicts ------------------------------------------ tidyverse_conflicts() --
## x dplyr::filter() masks stats::filter()
## x dplyr::lag()    masks stats::lag()
## x dplyr::recode() masks car::recode()
## x purrr::some()   masks car::some()
## i Use the conflicted package (<http://conflicted.r-lib.org/>) to force all conflicts to become errors
```

```
library(ggpubr)
library(readxl)
library(lmerTest)
```

```
## Loading required package: lme4
## Loading required package: Matrix
##
## Attaching package: 'Matrix'
##
## The following objects are masked from 'package:tidyr':
##
##     expand, pack, unpack
##
##
## Attaching package: 'lmerTest'
##
## The following object is masked from 'package:lme4':
##
##     lmer
##
## The following object is masked from 'package:stats':
##
##     step
```

```r
library(emmeans)
```

```
## Welcome to emmeans.
## Caution: You lose important information if you filter this package's results.
## See '? untidy'
```

```r
library(knitr)
library(kableExtra)
```

```
##
## Attaching package: 'kableExtra'
##
## The following object is masked from 'package:dplyr':
##
##     group_rows
```

```r
library(performance)
library(MuMIn)
library(tictoc)
library(GGally)
```

```
## Registered S3 method overwritten by 'GGally':
##   method from
##   +.gg   ggplot2
##
## Attaching package: 'GGally'
##
## The following object is masked from 'package:emmeans':
##
##     pigs
```

```r
library(scales)
```

```
##
## Attaching package: 'scales'
##
## The following object is masked from 'package:purrr':
##
##     discard
##
## The following object is masked from 'package:readr':
##
##     col_factor
```

```r
# Functions----
corr.stars <- function(x) {
  require(Hmisc)
  x <- as.matrix(x)
  R <- rcorr(x)$r
  p <- rcorr(x)$P
  # define notions for significance levels; spacing is important.
  mystars <- ifelse(p < .001,
                    paste0("\\textbf{", round(R, 2), "***}"),
                    ifelse(p < .01,
                           paste0("\\textbf{", round(R, 2), "**}"),
                           ifelse(p < .05,
```

```
                                    paste0("\\textbf{", round(R, 2), "*}"),
                                    ifelse(p < .10,
                                           paste0(round(R, 2), "$^{\\dagger}$"),
                                           format(round(R, 2), nsmall = 2)))))
  # build a new matrix that includes the correlations with their appropriate stars
  Rnew <- matrix(mystars,
                 ncol = ncol(x))
  diag(Rnew) <- paste(diag(R), " ",
                      sep = "")
  rownames(Rnew) <- colnames(x)
  colnames(Rnew) <- paste(colnames(x), "",
                          sep = "")
  # remove upper triangle
  Rnew <- as.matrix(Rnew)
  Rnew[upper.tri(Rnew, diag = TRUE)] <- ""
  Rnew <- as.data.frame(Rnew)
  # remove last column and return the matrix (which is now a data frame)
  Rnew <- cbind(Rnew[1:length(Rnew) - 1])
  return(Rnew)
}

# Cargar datos----

## Eye-tracking----
dat_et <- read_excel("Datos/BD-ET-CUC-UB.xlsx",
                     sheet = "CUC-UB") |>
  select(-c(Participant, Condicion, TOI, Interval, Media_respuesta, AOI, AOI_Global, Respuesta, Number_
  rename(ID = Recording,
         University = UNIVERSIDAD,
         Stimulus = Media,
         Condition = Condición,
         Relationship = Contexto,
         Sexual_dimorphism = Rostro,
         TDF = Total_duration_of_whole_fixations,
         NF = Number_of_whole_fixations,
         TFF = Time_to_first_whole_fixation,
         NMC = Number_of_mouse_clicks...21,
         TFMC = Time_to_first_mouse_click...22) |>
  mutate(across(where(is.character), as.factor)) |>
  mutate(Condition = fct_recode(Condition,
                                "Low" = "BAJA",
                                "High" = "ALTA"),
         Relationship = fct_recode(Relationship,
                                   "Short term" = "CP",
                                   "Long term" = "LP"),
         Sexual_dimorphism = fct_recode(Sexual_dimorphism,
                                        "Feminized" = "Feminizado",
                                        "Masculinized" = "Masculinizado")) |>
  mutate(Stimulus = ifelse(Sexual_dimorphism == "Feminized", paste0(str_sub(str_replace(Stimulus, ".* -
                           ifelse(Sexual_dimorphism == "Masculinized", paste0(str_sub(str_replace(Stimul
                                  Stimulus)),
         Choice = ifelse(NMC == 0, "No", "Yes"))
```

```
## New names:
```

```
## * `Number_of_mouse_clicks` -> `Number_of_mouse_clicks...17`
## * `Time_to_first_mouse_click` -> `Time_to_first_mouse_click...18`
## * `Number_of_mouse_clicks` -> `Number_of_mouse_clicks...21`
## * `Time_to_first_mouse_click` -> `Time_to_first_mouse_click...22`
```

```
## Cuestionarios----
### Sin calcular puntajes totales de instrumentos, para ver consistencia interna
quests <- read_excel("Datos/Cuestionario Datos Sociodemográficos  (Disponibilidad) (respuestas) (1).xlsx
                     sheet = "Respuestas de formulario 1") |>
  select(-c(Invitado, `Servicios ayuda`, `Correos cierre`)) |>
  rename(Date = Fecha,
         Age = edad,
         City = Ciudad,
         Education = Escolaridad,
         Ethnicity = Etnia,
         Gender = Sexo,
         Sex = Genero,
         Sexual_orientation = OS,
         Relationship_current = "Pareja actual",
         Relationship_duration = DuracionR,
         Relationship_status = EstadoR,
         Partner_sex = SexoParejaActual,
         Partner_masculinity = Masculinidad_pareja,
         Partner_dominance = Dominancia_pareja,
         Partner_attractiveness = Atractivo_pareja,
         Number_of_children = NumHijos,
         Hormonal_contraception = "Anticonceptivos hormonales",
         Contraceptive = Cual_anticonceptivo,
         Last_mentruation = "Ultima menstruacion",
         Currently_pregnant = "Embarazo actual",
         Sexual_abuse = "Experiencia abuso sexual",
         Comments = comentarios1,
         Medical_history = "antecedentes medicos",
         SP_happiness = "AP felicidad",
         SP_financial_security = "AP seguridad economica",
         SP_money_control = "AP control dinero",
         SP_attractiveness = "AP atractivo",
         SP_self_confidence = "AP autoconfianza",
         SP_self_esteem = "AP autoestima",
         SP_health = "AP salud",
         Electricity = "SB electricidad",
         Internet_access = "SB internet",
         TV = "SB television",
         Internet_use = "Fr acceso internet",
         Hospital_access = "Acceso hospital",
         Freq_illness = "Fr enfermedades",
         Socioeconomic_level = "Estrato socioeconomico",
         Neighborhood = "Barrio de residencia",
         Perceived_neighborhood_safety= "Seguridad barrio",
         Perceived_city_safety = "Seguridad ciudad",
         Perceived_home_safety = "Seguridad hogar",
         Perceived_country_safety = "Seguridad país",
         Freq_robery = "Fr de robos",
         Men_perceived_as_danger_to_children = "Hombres peligrosos hijos",
```

```
        Men_perceived_as_danger_to_partner = "Hombres peligrosos pareja",
        Partner_physical_violence = "VP fisica",
        Freq_partner_physical_violence = "Fr VP fisica",
        Partner_sexual_violence = "VP sexual",
        Freq_partner_sexual_violence = "Fr VP sexual",
        Partner_infidelity = "Infidelidad",
        Freq_partner_infidelity = "Fr infidelidad",
        Victim_of_violence = "Victima de alguna violencia",
        Violence_type = "Tipo violencia",
        Victim_of_gender_violence = "Victima violencia género",
        Victim_of_armed_conflict = "Victima conflicto armado",
        Control_question_1 = "Sin leer",
        Control_question_2 = "Broma") |>
 mutate(Education = factor(Education, levels = c("Primaria",
                                                 "Bachillerato",
                                                 "Universitario",
                                                 "Posgrado")),
        Sexual_orientation = factor(Sexual_orientation,
                                    levels = c("Exclusivamente heterosexual",
                                               "Principalmente heterosexual, con contactos homosexuales
                                               "Predominantemente heterosexual, aunque con contactos ho
                                               "Bisexual",
                                               "Pansexual",
                                               "Demisexual")),
        Relationship_status = factor(Relationship_status,
                                     levels = c("Soltero sin contactos sexuales en el último año",
                                                "Soltero con contactos sexuales en el último año",
                                                "Relación exclusiva o matrimonio - viven juntos",
                                                "Relación exclusiva - no viven juntos",
                                                "Relación no exclusiva - contactos sexuales con otras p
        Internet_use = factor(Internet_use,
                              levels = c("Cada día",
                                         "Cada mes",
                                         "Cada año")),
        Socioeconomic_level = as.factor(Socioeconomic_level),
        City = ifelse(City == "Bogotá D.C." |
                        City == "Madrid, Cundinamarca" |
                        City == "Zipaquirá, Cundinamarca" |
                        City == "Zipaquirá" |
                        City == "Mosquera, cundinamarca" |
                        City == "Mosquera" |
                        City == "FUNZA, CUNDINAMARCA" |
                        City == "Madrid Cundinamarca" |
                        City == "Une- Cundinamarca",
                      "Bogota Region",
                      ifelse(City == "Soledad" |
                               City == "Barranquilla" |
                               City == "BARRANQUILLA" |
                               City == "Soledad, Atlantico" |
                               City == "Costa Atlantica" |
                               City == "Corozal",
                             "Atlantico Region",
                             "Other"))) |>
```

```r
  mutate(Education = recode(Education,
                            "Primaria" =  "Primary school",
                            "Bachillerato" = "High school",
                            "Universitario" = "University",
                            "Posgrado" = "Postgraduate")) |>
  mutate(Sexual_orientation = recode(Sexual_orientation,
                                     "Exclusivamente heterosexual" = "Exclusively heterosexual",
                                     "Principalmente heterosexual, con contactos homosexuales esporádic
                                     "Predominantemente heterosexual, aunque con contactos homosexuales
                                     "Bisexual" = "Bisexual",
                                     "Pansexual" = "Pansexual",
                                     "Demisexual" = "Demisexual")) |>
  mutate(Relationship_status = recode(Relationship_status,
                                      "Soltero sin contactos sexuales en el último año" = "Single withou
                                      "Soltero con contactos sexuales en el último año" = "Single with
                                      "Relación exclusiva o matrimonio - viven juntos" = "Exclusive rela
                                      "Relación exclusiva - no viven juntos" = "Exclusive relationship
                                      "Relación no exclusiva - contactos sexuales con otras personas" =
  mutate(Internet_use = recode(Internet_use,
                               "Cada día" = "Daily",
                               "Cada mes" = "Monthly",
                               "Cada año" = "Yearly")) |>
  mutate(across(starts_with("Men_perceived_as_danger_to_"),
                ~recode(.,
                        "Completamente en desacuerdo" =  1,
                        "Ligeramente en desacuerdo" = 2,
                        "Ni de acuerdo ni en desacuerdo" = 3,
                        "Ligeramente deacuerdo" = 4,
                        "Completamente deacuerdo" = 5))) |>
  mutate(across(where(is.character), ~replace(., . == "Si" , "Yes"))) |>
  mutate(across(where(is.character), ~replace(., . == "Sí" , "Yes"))) |>
  mutate(across(where(is.character), ~replace(., . == "No quiero responder" , "Prefer not to answer")))
  mutate(across(where(is.character), ~replace(., . == "Mujer" , "Woman"))) |>
  mutate(across(where(is.character), ~replace(., . == "Hombre" , "Man"))) |>
  mutate(across(where(is.character), ~replace(., . == "Femenino" , "Female"))) |>
  mutate(across(where(is.character), ~replace(., . == "Masculino" , "Male"))) |>
  mutate(across(where(is.character), ~replace(., . == "Sin pareja actual" , "Single"))) |>
  mutate(across(where(is.character), ~replace(., . == "Sí, una vez en la adultez" , "Once as adult")))
  mutate(across(where(is.character), ~replace(., . == "Sí, tanto en la infancia como en la adultez" , "
  mutate(across(where(is.character), ~replace(., . == "Sí, más de una vez en mi infancia" , "More than
  mutate(across(where(is.character), ~replace(., . ==  "Sí, una vez e mi infancia" , "Once as child")))
  mutate(across(where(is.character), ~replace(., . ==  "Afrocolombiano" , "Afrocolombian"))) |>
  mutate(across(where(is.character), ~replace(., . ==  "Desplazado conflicto armado" , "Undetermined")))
  mutate(across(where(is.character), ~replace(., . ==  "Ninguna" , "Undetermined"))) |>
  mutate(across(where(is.character), ~replace(., . ==  "Comunidad negra" , "Afrocolombian"))) |>
  mutate(across(where(is.character), ~replace(., . ==  "Raizal del Archipiélago de San Andrés, Providen
  mutate(across(where(is.character), ~replace(., . ==  "Patos" , "Indigenous"))) |>
  mutate(across(where(is.character), ~replace(., . ==  "Indígena" , "Indigenous"))) |>
  mutate(across(where(is.character), ~replace(., . ==  "No estoy segura" , "Unsure")))

### Con puntajes totales de instrumentos, menos columnas
quests_clean <- quests |>
  mutate(across(starts_with("Escasez alimentaria"),
```

```
                ~recode(.,
                        "Nunca" =  0,
                        "Rara vez/algunas veces" = 1,
                        "Casi siempre" = 2))) |>
  rowwise() |>
  mutate(Self_esteem = sum(autoestima_I1, 5-autoestima_I2, autoestima_I3, autoestima_I4,
                           autoestima_I5, 5-autoestima_I6, autoestima_I7, 5-autoestima_I8,
                           5-autoestima_I9, autoestima_I10),
         Self_perception = sum(across(starts_with("SP_"))),
         Perceived_safety = sum(across(ends_with("_safety"))),
         Food_insecurity = sum(across(starts_with("Escasez alimentaria")))) |>
  select(!starts_with("autoestima_")) |>
  mutate(across(where(is.character), as.factor))

## Evaluación subjestiva de rostros----
### Formato ancho
eval <- read_excel("Datos/Evaluación subjetiva rostros (Respuestas).xlsx") |>
  select(-c(123:124)) |>
  rowwise() |>
  mutate(Masculinity_masculinized = sum(across(ends_with("M Mas"))),
         Masculinity_feminized = sum(across(ends_with("F Mas"))),
         Attractiveness_masculinized = sum(across(ends_with("M Atr"))),
         Attractiveness_feminized = sum(across(ends_with("F Atr")))) |>
  rename(Date = "Marca temporal",
         ID = "Escribe tu código de participante")
### Formato largo
eval_long <- left_join(eval |>
                         select(-c(123:126)) |>
                         select(!ends_with(" Mas")) |>
                         pivot_longer(cols = ends_with("Atr"),
                                      names_to = "Stimulus",
                                      values_to = "Attractiveness") |>
                         mutate(Stimulus = str_remove_all(Stimulus, " Atr")),
                       eval |>
                         select(-c(123:126)) |>
                         select(!ends_with(" Atr")) |>
                         pivot_longer(cols = ends_with("Mas"),
                                      names_to = "Stimulus",
                                      values_to = "Masculinity") |>
                         mutate(Stimulus = str_remove_all(Stimulus, " Mas")))
```

```
## Joining with `by = join_by(Date, ID, Stimulus)`
```

```
## Disponibilidad de recursos----
reg <- rbind(read_excel("Datos/3Registro Participantes Disponibilidad de Recursos-corregido.xlsx",
                        sheet = "UB") |>
               mutate(University = "UB"),
             read_excel("Datos/3Registro Participantes Disponibilidad de Recursos-corregido.xlsx",
                        sheet = "CUC") |>
               mutate(University = "CUC")) |>
  select(-c(Grupo, `Entrega de kit`, `Protocolo de bioseguridad`, `Requisitos previos al registro`, Cons
            `Código de evaluador`:`Código auxiliar que reclutó`)) |>
  rename(Date = "Fecha de registro",
         ID = "Codigo del Participante",
```

```
         Condition = "Condicion",
         Calibration = "Calibración",
         Gaze_perc = "% Gaze",
         Condition_happiness = "Q Feliz",
         Condition_physical_safety = "Q Segura físicamente",
         Condition_healthy = "Q Saludable",
         Condition_economic_security = "Q Segura económicamente",
         Body_temperature = "Temperatura",
         Ovulating = "Test de ovulación",
         Saliva_pre = "Recolección de saliva pre",
         Saliva_pre_time = "Hora...18",
         Eye_tracking = "Rastreo Ocular",
         Subjective_evaluation = "Evaluación subjetiva",
         Sociodemographic_questionnaire = "Cuestionario sociodemográfico",
         Saliva_post = "Recolección de saliva post",
         Saliva_post_time = "Hora...23",
         Notes = "Observaciones") |>
  mutate(Condition = fct_recode(Condition,
                                "Low" = "Baja",
                                "High" = "Alta"),
         Calibration = fct_recode(Calibration,
                                  "<=0.5" = "<0.5 (menor a 0.5)",
                                  ">0.5" = ">0.5 (mayor a 0.5)",
                                  "<=0.5" = "0.5 (igual a 0.5)",
                                  NULL = "Selecciona"),
         Ovulating = fct_recode(as.factor(Ovulating),
                                "No" = "0",
                                "Yes" = "1")) |>
  mutate_all(~str_replace_all(., "SI", "Yes")) |>
  mutate_all(~str_replace_all(., "NO", "No")) |>
  mutate_all(~str_replace_all(., "INCOMPLETO", "No")) |>
  mutate_all(~str_replace_all(., "Recuperado", "Data recovered")) |>
  mutate_all(~str_replace_all(., "RECUPERADO", "Data recovered")) |>
  mutate_all(~na_if(., "Selecciona")) |>
  mutate_all(~na_if(., "N/A")) |>
  mutate(across(starts_with("Condition_"), as.numeric))
```

```
## New names:
## New names:
## * `Hora` -> `Hora...18`
## * `Hora` -> `Hora...23`
```

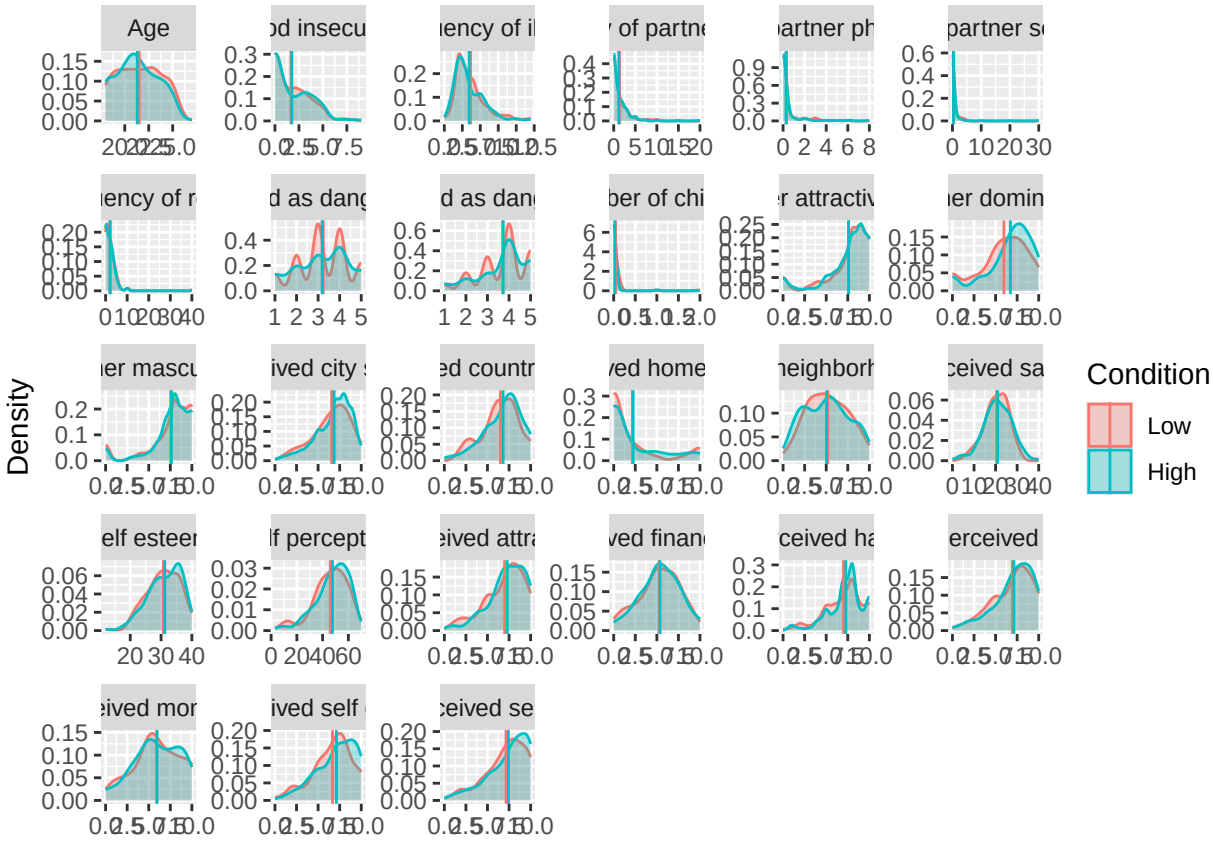
```
# Base de datos final----
## Integrada----
dat_int <- dat_et |>
  left_join(quests_clean, by = c("ID"), multiple = "all") |>
  left_join(eval_long, by = c("ID", "Stimulus"), multiple = "all") |>
  left_join(reg, by = c("ID", "University", "Condition"), multiple = "all")

### Tamaño de muestra----
n_recolectado <- dat_int |>
  summarise(n = n_distinct(ID))

## Base de datos filtrada----
```

```r
dat <- dat_int |>
  filter(Control_question_1 == "No" & Control_question_2 == "No") |>
  filter(Sexual_orientation %in%
           c("Exclusively heterosexual",
             "Predominantly heterosexual"))

### Tamaño de muestra----
n_filtrado <- dat |>
  summarise(n = n_distinct(ID))

## Bases filtradas individuales----
### Disponibilidad de recursos----
reg_fin <- reg |>
  left_join(quests_clean, by = c("ID")) |>
  filter(ID %in% unique(dat$ID))

## Cuestionarios---
quests_fin <- quests_clean |>
  filter(ID %in% unique(dat$ID))

# Descriptivos----
## Sociodemographic----
desc_quest <- quests_fin |>
  left_join(reg, by = c("ID")) |>
  select(ID, Condition, Age, City, Education, Ethnicity, Sexual_orientation, Relationship_current,
         Relationship_status:Hormonal_contraception, Sexual_abuse,
         SP_happiness:Socioeconomic_level,
         Perceived_country_safety:Freq_robery,
         Men_perceived_as_danger_to_children:Victim_of_violence,
         Victim_of_gender_violence:Victim_of_armed_conflict,
         Self_esteem:Food_insecurity) |>
  mutate(across(where(is.character), as.factor))

### Sociodemographic numeric----
desc_quest |>
  select(ID, Condition, where(is.numeric)) |>
  pivot_longer(where(is.numeric),
               names_to = "Variable",
               values_to = "Value") |>
  mutate(Variable = str_replace_all(Variable, "_", " ")) |>
  mutate(Variable = str_replace_all(Variable, "Freq", "Frequency of")) |>
  mutate(Variable = str_replace_all(Variable, "SP", "Self-perceived")) |>
  #mutate(Variable = case_when(str_detect(Variable, "_safety") ~ str_replace_all(Variable, "Self-percei
  ggplot(aes(x = Value, fill = Condition, color = Condition)) +
  geom_density(alpha = 0.3) +
  facet_wrap(~Variable, scales = "free") +
  stat_summary(aes(xintercept = after_stat(x), y = 0),
               fun = mean, geom = "vline", orientation = "y") +
  labs(x = NULL, y = "Density")
```

```
## Warning: Removed 1 row containing non-finite outside the scale range
## (‘stat_density()‘).
```

```
## Warning: Removed 1 row containing non-finite outside the scale range
```

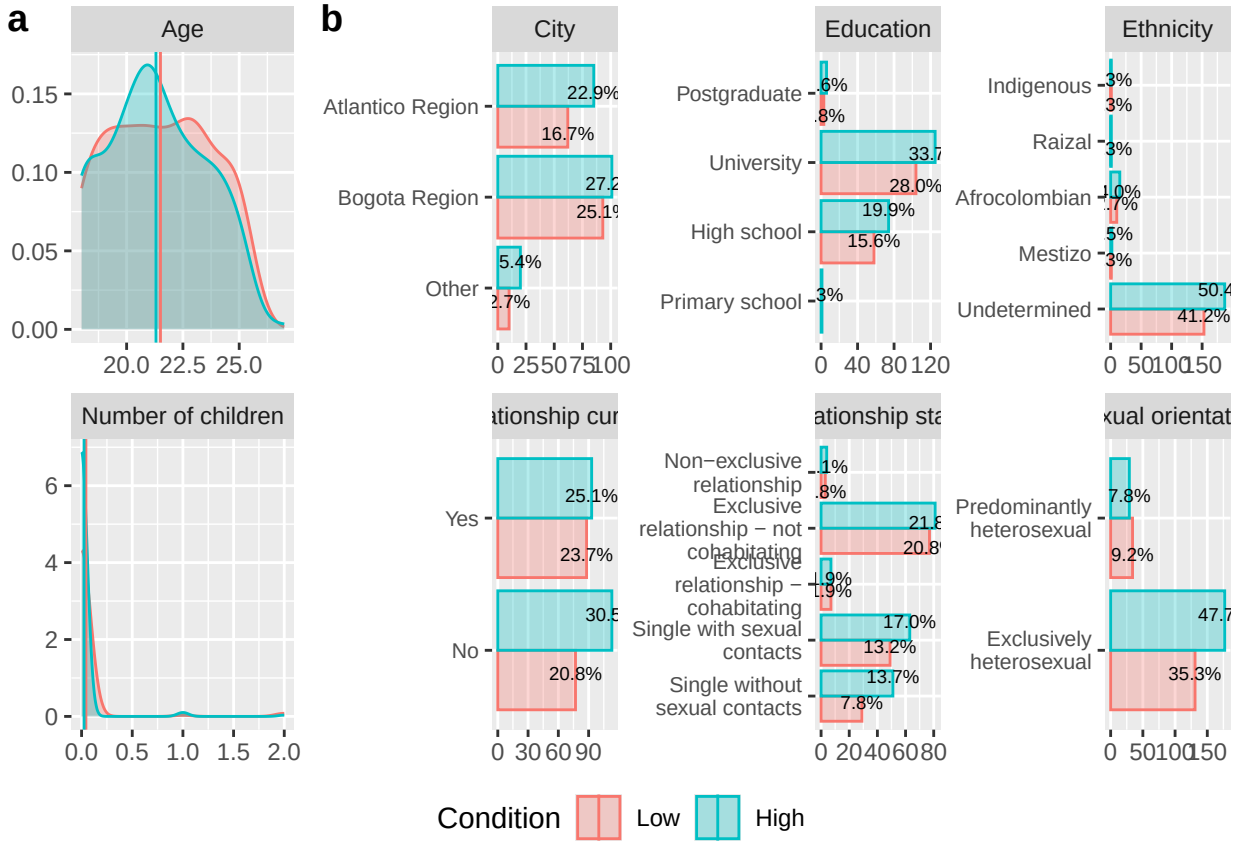
```
## (`stat_summary()`).
```




```
### Sociodemographic categorical----
desc_quest |>
  select(ID, Condition, where(is.factor), City) |>
  pivot_longer(City:Victim_of_armed_conflict,
               names_to = "Variable",
               values_to = "Value") |>
  mutate(Variable = str_replace_all(Variable, "_", " ")) |>
  ggplot(aes(y = Value, fill = Condition, color = Condition)) +
  geom_bar(alpha = 0.3, position = position_dodge()) +
  geom_text(aes(label = scales::percent(after_stat(prop), accuracy = 0.1)),
            vjust = "inward",
            position = position_dodge(.9),
            stat = "prop",
            color = "black",
            size = 2.5) +
  facet_wrap(~Variable, scales = "free") +
  scale_y_discrete(labels = label_wrap(20)) +
  theme(axis.text.y = element_text(size = 8)) +
  labs(x = NULL, y = "Count")
```

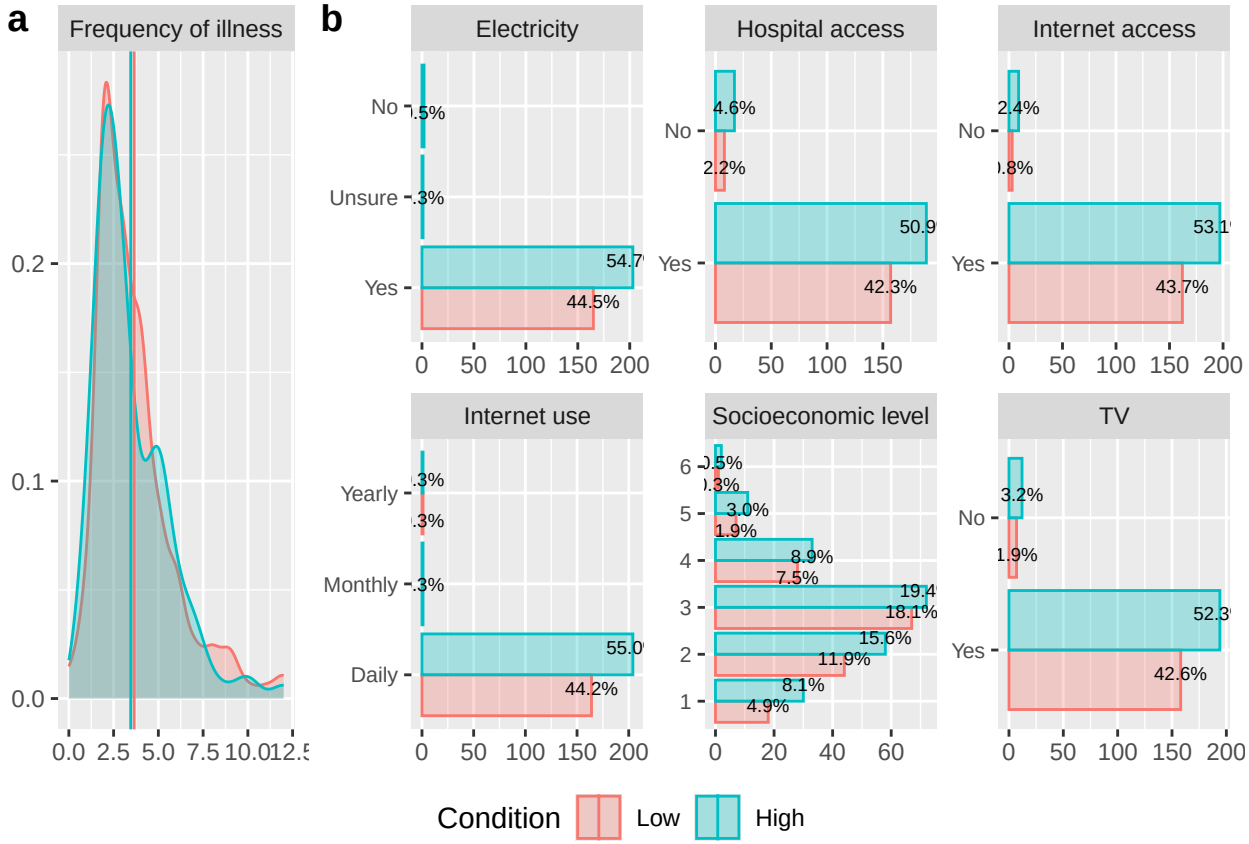

```
## Sociodemographic factors----
ggarrange(desc_quest |>
            select(ID, Condition, Age, Number_of_children) |>
            pivot_longer(where(is.numeric),
                         names_to = "Variable",
                         values_to = "Value") |>
            mutate(Variable = str_replace_all(Variable, "_", " ")) |>
            ggplot(aes(x = Value, fill = Condition, color = Condition)) +
            geom_density(alpha = 0.3) +
            facet_wrap(~Variable, scales = "free", ncol = 1) +
            stat_summary(aes(xintercept = after_stat(x), y = 0),
                         fun = mean, geom = "vline", orientation = "y") +
            labs(x = NULL, y = NULL),
          desc_quest |>
            select(ID, Condition, Sexual_orientation, City, Ethnicity,
                   Education, Relationship_current, Relationship_status) |>
            pivot_longer(Sexual_orientation:Relationship_status,
                         names_to = "Variable",
                         values_to = "Value") |>
            mutate(Variable = str_replace_all(Variable, "_", " ")) |>
            ggplot(aes(y = Value, fill = Condition, color = Condition)) +
            geom_bar(alpha = 0.3, position = position_dodge()) +
            geom_text(aes(label = scales::percent(after_stat(prop), accuracy = 0.1)),
                      vjust = "inward",
                      position = position_dodge(.9),
                      stat = "prop",
```

```
                    color = "black",
                    size = 2.5) +
          facet_wrap(~Variable, scales = "free") +
          scale_y_discrete(labels = label_wrap(20)) +
          theme(axis.text.y = element_text(size = 8)) +
          labs(x = NULL, y = NULL),
        widths = c(1, 3),
        common.legend = TRUE,
        legend = "bottom",
        labels = "auto")
```



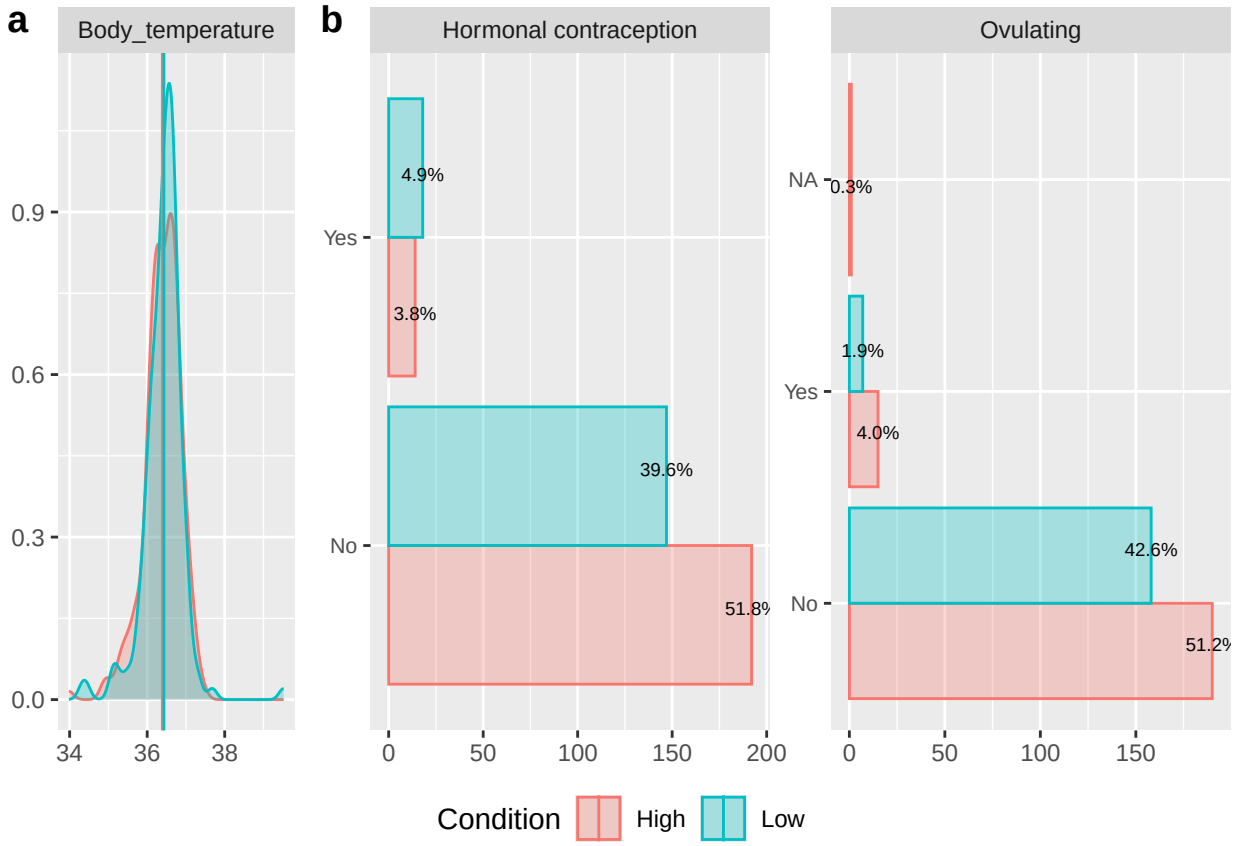

```
## Access to resources factors----
ggarrange(desc_quest |>
            select(ID, Condition, Freq_illness) |>
            pivot_longer(Freq_illness,
                         names_to = "Variable",
                         values_to = "Value") |>
            mutate(Variable = str_replace_all(Variable, "_", " ")) |>
            mutate(Variable = str_replace_all(Variable, "Freq", "Frequency of")) |>
            ggplot(aes(x = Value, fill = Condition, color = Condition)) +
            geom_density(alpha = 0.3) +
            facet_wrap(~Variable,
                       labeller = labeller(c("Frequency of illness"))) +
            stat_summary(aes(xintercept = after_stat(x), y = 0),
                         fun = mean, geom = "vline", orientation = "y") +
            labs(x = NULL, y = NULL),
```

```
        desc_quest |>
          select(ID, Condition, Socioeconomic_level, Electricity, Internet_access, Internet_use,
                 TV, Hospital_access) |>
          pivot_longer(Socioeconomic_level:Hospital_access,
                       names_to = "Variable",
                       values_to = "Value") |>
          mutate(Variable = str_replace_all(Variable, "_", " ")) |>
          ggplot(aes(y = Value, fill = Condition, color = Condition)) +
          geom_bar(alpha = 0.3, position = position_dodge()) +
          geom_text(aes(label = scales::percent(after_stat(prop), accuracy = 0.1)),
                    vjust = "inward",
                    position = position_dodge(.9),
                    stat = "prop",
                    color = "black",
                    size = 2.5) +
          facet_wrap(~Variable, scales = "free") +
          scale_y_discrete(labels = label_wrap(20)) +
          theme(axis.text.y = element_text(size = 8)) +
          labs(x = NULL, y = NULL),
        widths = c(1, 3),
        common.legend = TRUE,
        legend = "bottom",
        labels = "auto")
```

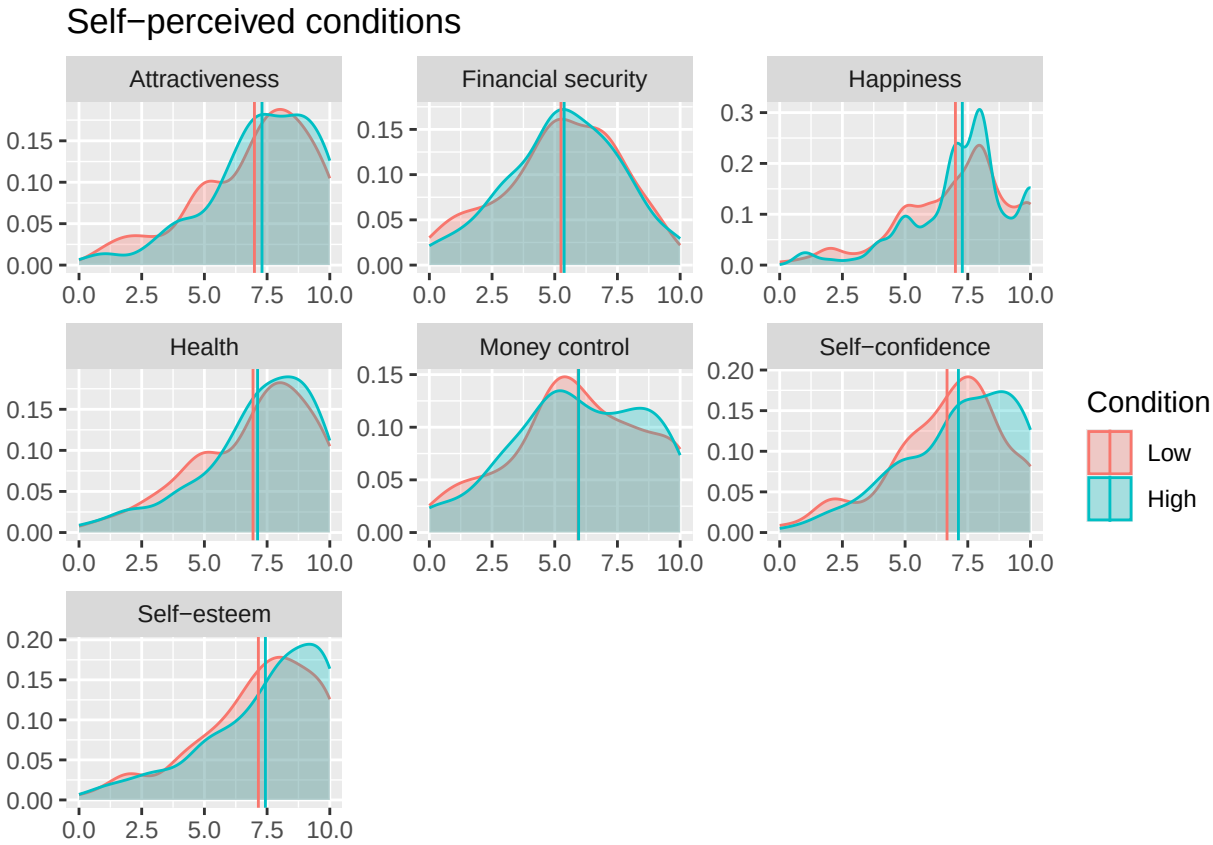



```
## Hormonal factors----
ggarrange(reg_fin |>
```

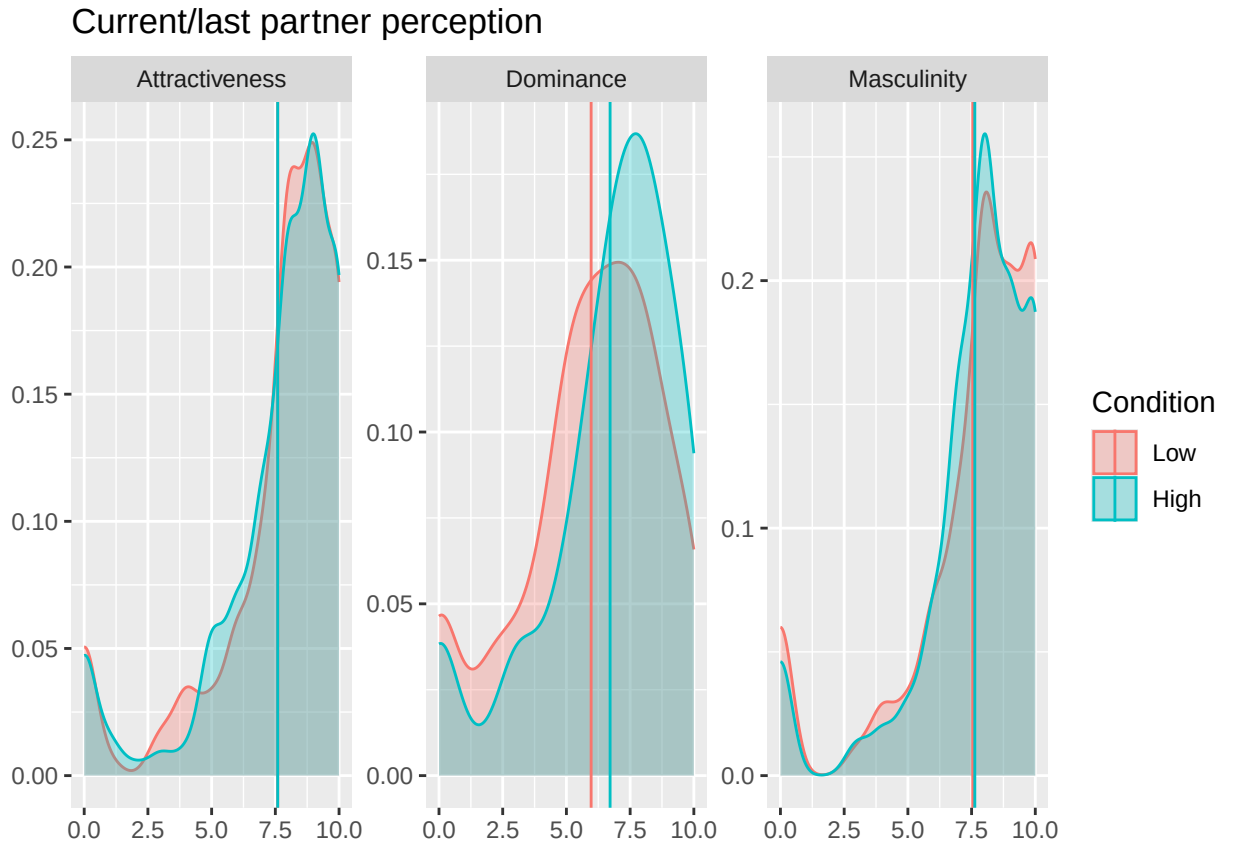
```
    select(ID, Condition, Body_temperature) |>
    pivot_longer(Body_temperature,
                 names_to = "Variable",
                 values_to = "Value") |>
    mutate(Value = as.numeric(Value)) |>
    ggplot(aes(x = Value, fill = Condition, color = Condition)) +
    geom_density(alpha = 0.3) +
    facet_wrap(~Variable) +
    stat_summary(aes(xintercept = after_stat(x), y = 0),
                 fun = mean, geom = "vline", orientation = "y") +
    labs(x = NULL, y = NULL),
  reg_fin |>
    left_join(desc_quest, by = c("ID", "Condition", "Hormonal_contraception")) |>
    select(ID, Condition, Ovulating, Hormonal_contraception) |>
    pivot_longer(Ovulating:Hormonal_contraception,
                 names_to = "Variable",
                 values_to = "Value") |>
    mutate(Variable = str_replace_all(Variable, "_", " ")) |>
    ggplot(aes(y = Value, fill = Condition, color = Condition)) +
    geom_bar(alpha = 0.3, position = position_dodge()) +
    geom_text(aes(label = scales::percent(after_stat(prop), accuracy = 0.1)),
              vjust = "inward",
              position = position_dodge(.9),
              stat = "prop",
              color = "black",
              size = 2.5) +
    facet_wrap(~Variable, scales = "free") +
    scale_y_discrete(labels = label_wrap(20)) +
    theme(axis.text.y = element_text(size = 8)) +
    labs(x = NULL, y = NULL),
  widths = c(1, 3),
  common.legend = TRUE,
  legend = "bottom",
  labels = "auto")
```




```
## Psychological factors----
desc_quest |>
  select(ID, Condition, starts_with("SP_")) |>
  pivot_longer(where(is.numeric),
               names_to = "Variable",
               values_to = "Value") |>
  mutate(Variable = str_replace_all(Variable, "SP_", "")) |>
  mutate(Variable = str_replace_all(Variable, "self_", "self-")) |>
  mutate(Variable = str_replace_all(Variable, "_", " ")) |>
  mutate(Variable = str_to_sentence(Variable)) |>
  ggplot(aes(x = Value, fill = Condition, color = Condition)) +
  geom_density(alpha = 0.3) +
  labs(title = "Self-perceived conditions") +
  facet_wrap(~Variable, scales = "free") +
  stat_summary(aes(xintercept = after_stat(x), y = 0),
               fun = mean, geom = "vline", orientation = "y") +
  labs(x = NULL, y = NULL)
```




```
## Last partner perception----
desc_quest |>
  select(ID, Condition, Partner_masculinity, Partner_dominance,
         Partner_attractiveness) |>
  pivot_longer(where(is.numeric),
               names_to = "Variable",
               values_to = "Value") |>
  mutate(Variable = str_replace_all(Variable, "Partner_", "")) |>
  mutate(Variable = str_to_sentence(Variable)) |>
  ggplot(aes(x = Value, fill = Condition, color = Condition)) +
  geom_density(alpha = 0.3) +
  labs(title = "Current/last partner perception") +
  facet_wrap(~Variable, scales = "free") +
  stat_summary(aes(xintercept = after_stat(x), y = 0),
               fun = mean, geom = "vline", orientation = "y") +
  labs(x = NULL, y = NULL)
```




```
## Factors related con context violence----
ggarrange(desc_quest |>
            select(ID, Condition, ends_with("_safety"), Freq_robery) |>
            pivot_longer(where(is.numeric),
                         names_to = "Variable",
                         values_to = "Value") |>
            mutate(Value = as.numeric(Value)) |>
            mutate(Variable = str_replace_all(Variable, "_safety", "")) |>
            mutate(Variable = str_replace_all(Variable, "Perceived_", "")) |>
            mutate(Variable = str_replace_all(Variable, "Freq_", "Frequency of ")) |>
            mutate(Variable = str_replace_all(Variable, "Perceived", "General perception")) |>
            mutate(Variable = str_to_sentence(Variable)) |>
            ggplot(aes(x = Value, fill = Condition, color = Condition)) +
            geom_density(alpha = 0.3) +
            labs(title = "Safety perception") +
            facet_wrap(~factor(Variable, c("Country", "City", "Neighborhood", "Home",
                                           "Frequency of robery", "General perception")),
                               scales = "free") +
            stat_summary(aes(xintercept = after_stat(x), y = 0),
                         fun = mean, geom = "vline", orientation = "y") +
            labs(x = NULL, y = NULL),
          ggarrange(desc_quest |>
                      select(ID, Condition,
                             Men_perceived_as_danger_to_children,
                             Men_perceived_as_danger_to_partner) |>
                      pivot_longer(Men_perceived_as_danger_to_children:Men_perceived_as_danger_to_partn
```

```
                                names_to = "Variable",
                                values_to = "Value") |>
                  mutate(Value = as.factor(Value)) |>
                  mutate(Variable = str_replace_all(Variable,
                                                    "Men_perceived_as_danger_to_", "")) |>
                  mutate(Variable = str_to_sentence(Variable)) |>
                  ggplot(aes(y = Value, fill = Condition, color = Condition)) +
                  geom_bar(alpha = 0.3, position = position_dodge()) +
                  geom_text(aes(label = scales::percent(after_stat(prop), accuracy = 0.1)),
                            vjust = "inward",
                            position = position_dodge(.9),
                            stat = "prop",
                            color = "black",
                            size = 2.5) +
                  labs(title = "Men perceived as danger to...") +
                  facet_wrap(~Variable, scales = "free") +
                  scale_y_discrete(labels = label_wrap(20)) +
                  theme(axis.text.y = element_text(size = 8)) +
                  labs(x = NULL, y = NULL),
                desc_quest |>
                  select(ID, Condition, Victim_of_armed_conflict) |>
                  pivot_longer(Victim_of_armed_conflict,
                               names_to = "Variable",
                               values_to = "Value") |>
                  mutate(Variable = str_replace_all(Variable,
                                                    "_", " ")) |>
                  ggplot(aes(y = Value, fill = Condition, color = Condition)) +
                  geom_bar(alpha = 0.3, position = position_dodge()) +
                  geom_text(aes(label = scales::percent(after_stat(prop), accuracy = 0.1)),
                            vjust = "inward",
                            position = position_dodge(.9),
                            stat = "prop",
                            color = "black",
                            size = 2.5) +
                  labs(title = "Victim of armed conflict") +
                  facet_wrap(~Variable, scales = "free") +
                  scale_y_discrete(labels = label_wrap(20)) +
                  theme(axis.text.y = element_text(size = 8)) +
                  labs(x = NULL, y = NULL),
                ncol = 1,
                labels = c("", "c")),
        #widths = c(2, 1),
        common.legend = TRUE,
        legend = "bottom",
        labels = "auto")
```

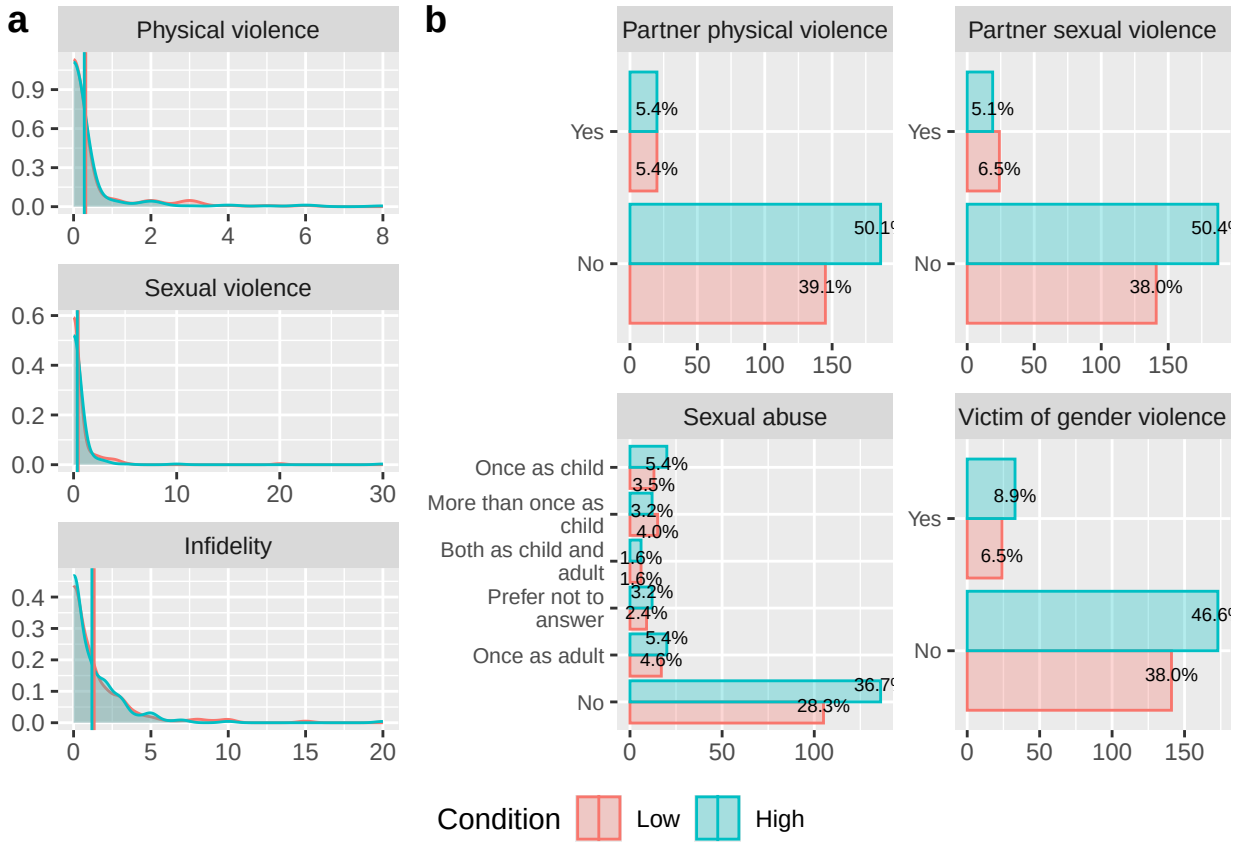
```
## Warning: Removed 1 row containing non-finite outside the scale range (`stat_density()`).
## Removed 1 row containing non-finite outside the scale range (`stat_summary()`).
```

```
## Warning: Removed 1 row containing non-finite outside the scale range
## (`stat_density()`).
```

```
## Warning: Removed 1 row containing non-finite outside the scale range
## (`stat_summary()`).
```

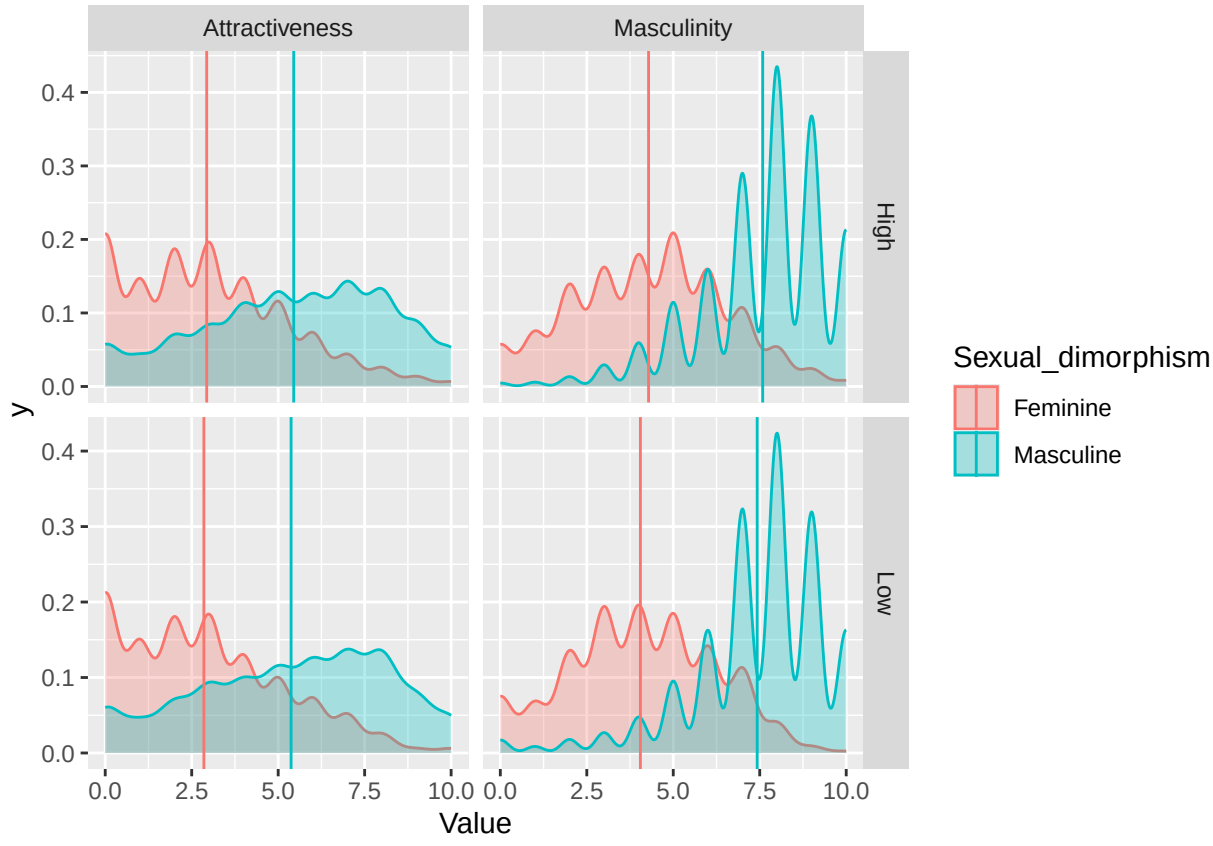

```
## Factors related con gender and partner violence----
ggarrange(desc_quest |>
            select(ID, Condition, Freq_partner_physical_violence:Freq_partner_infidelity) |>
            pivot_longer(where(is.numeric),
                         names_to = "Variable",
                         values_to = "Value") |>
            mutate(Value = as.numeric(Value)) |>
            mutate(Variable = str_replace_all(Variable, "Freq_partner_", "")) |>
            mutate(Variable = str_replace_all(Variable, "_", " ")) |>
            mutate(Variable = str_to_sentence(Variable)) |>
            ggplot(aes(x = Value, fill = Condition, color = Condition)) +
            geom_density(alpha = 0.3) +
            facet_wrap(~factor(Variable, c("Physical violence",
                                           "Sexual violence",
                                           "Infidelity")),
                       scales = "free", ncol = 1) +
            stat_summary(aes(xintercept = after_stat(x), y = 0),
                         fun = mean, geom = "vline", orientation = "y") +
            labs(x = NULL, y = NULL),
          desc_quest |>
            select(ID, Condition,
                   Victim_of_gender_violence,
                   Partner_physical_violence,
                   Partner_sexual_violence,
                   Sexual_abuse) |>
            pivot_longer(Victim_of_gender_violence:Sexual_abuse,
```

```
                    names_to = "Variable",
                    values_to = "Value") |>
    mutate(Value = as.factor(Value)) |>
    mutate(Variable = str_replace_all(Variable,
                                      "_", " ")) |>
    mutate(Variable = str_to_sentence(Variable)) |>
    ggplot(aes(y = Value, fill = Condition, color = Condition)) +
    geom_bar(alpha = 0.3, position = position_dodge()) +
    geom_text(aes(label = scales::percent(after_stat(prop), accuracy = 0.1)),
              vjust = "inward",
              position = position_dodge(.9),
              stat = "prop",
              color = "black",
              size = 2.5) +
    facet_wrap(~Variable,
                         scales = "free") +
    scale_y_discrete(labels = label_wrap(20)) +
    theme(axis.text.y = element_text(size = 8)) +
    labs(x = NULL, y = NULL),
  widths = c(1, 2),
  common.legend = TRUE,
  legend = "bottom",
  labels = "auto")
```

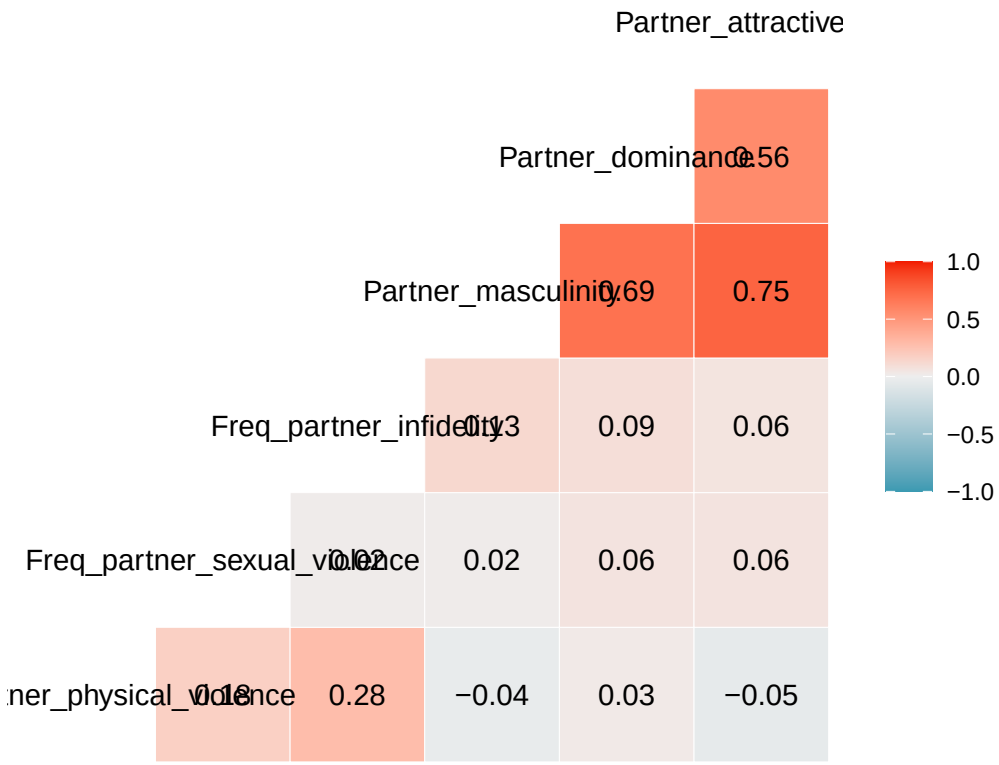



```
## Subjective evaluation----
eval_long |>
```

```
  left_join(reg, by = c("ID")) |>
  filter(ID %in% unique(dat$ID)) |>
  rowwise() |>
  mutate(Sexual_dimorphism = ifelse(grepl("F", Stimulus), "Feminine", "Masculine")) |>
  select(Condition, Sexual_dimorphism, Attractiveness, Masculinity) |>
  pivot_longer(Attractiveness:Masculinity,
               names_to = "Variable",
               values_to = "Value") |>
  ggplot(aes(x = Value, fill = Sexual_dimorphism, color = Sexual_dimorphism)) +
  geom_density(alpha = 0.3) +
  facet_grid(Condition~Variable, scales = "free") +
  stat_summary(aes(xintercept = after_stat(x), y = 0),
               fun = mean, geom = "vline", orientation = "y")
```




```
## Correlations----
### Correlations in partner perceptions----
quests_fin |>
  select(Freq_partner_physical_violence,
         Freq_partner_sexual_violence,
         Freq_partner_infidelity,
         Partner_masculinity,
         Partner_dominance,
         Partner_attractiveness) |>
  ggcorr(label = TRUE,
         label_round = 2)
```




```
### Correlations table----
desc_quest |>
  left_join(reg_fin |>
              select(ID, Body_temperature),
            by = c("ID")) |>
  select(Age, Number_of_children,
         Freq_illness,
         Body_temperature,
         starts_with("SP_"),
         Partner_masculinity, Partner_dominance, Partner_attractiveness,
         ends_with("_safety"), Freq_robery,
         Freq_partner_physical_violence,
         Freq_partner_sexual_violence,
         Freq_partner_infidelity) |>
  rename_with(~str_replace_all(., "_", " ")) |>
  rename_with(~str_replace_all(., "Freq", "Frequency of")) |>
  rename_with(~str_replace_all(., "SP ", "")) |>
  rename_with(~str_replace_all(., "Perceived ", "")) |>
  rename_with(~str_to_sentence(.)) |>
  corr.stars() |>
  rownames_to_column(var = " ") |>
  slice(-1) |>
  kable(digits = 2,
        booktabs = TRUE,
        align = c("l", rep("c", 9)),
        linesep = "",
```

```
       caption = "Correlations between XXXXXX",
       escape = FALSE) |>
  kable_styling(latex_options = c("HOLD_position", "scale_down")) |>
  add_header_above(c(" ",
                     "Sociodemographic factors" = 2,
                     "health" = 1,
                     "Hormonal factors" = 1,
                     "Self-perceived conditions" = 7,
                     "Current/last partner perception" = 3,
                     "Perceived context violence" = 6,
                     "Gender and partner violence" = 2)) |>
  column_spec(2:10, width = "2.2cm") |>
  footnote(general = paste0("Values represent Pearson correlation coefficients ($r$). ",
                            "For significance, $^{\\\\dagger}p$ < 0.1, *$p$ < 0.05, ",
                            "**$p$ < 0.01, ***$p$ < 0.001. ",
                            "Significant correlations are in bold."),
           threeparttable = TRUE,
           footnote_as_chunk = TRUE,
           escape = FALSE) |>
  landscape()
```

```
## Loading required package: Hmisc
##
## Attaching package: 'Hmisc'
##
## The following objects are masked from 'package:dplyr':
##
##     src, summarize
##
## The following objects are masked from 'package:base':
##
##     format.pval, units
```

```
## Warning in styling_latex_scale(out, table_info, "down"): Longtable cannot be
## resized.
```

	Sociodemographic factors		health	Hormonal factors				Sel
	Age	Number of children	Frequency of illness	Body temperature	Happiness	Financial security	Money control	
Number of children	\textbf{0.13**}							
Frequency of illness	-0.05	0.05						
Body temperature	-0.03	0.03	0.01					
Happiness	-0.06	-0.04	\textbf{-0.18***}	\textbf{-0.14**}				
Financial security	\textbf{-0.11*}	\textbf{-0.11*}	-0.03	-0.08	\textbf{0.55***}			
Money control	0.03	-0.09†	\textbf{-0.17**}	0.00	\textbf{0.46***}	\textbf{0.59***}		
Attractiveness	-0.03	-0.08	\textbf{-0.18***}	\textbf{-0.13*}	\textbf{0.65***}	\textbf{0.44***}	\textbf{0.48***}	
Self confidence	-0.05	-0.08	\textbf{-0.24***}	\textbf{-0.11*}	\textbf{0.7***}	\textbf{0.46***}	\textbf{0.48***}	\
Self esteem	-0.04	-0.07	\textbf{-0.25***}	\textbf{-0.11*}	\textbf{0.72***}	\textbf{0.46***}	\textbf{0.5***}	\
Health	-0.02	-0.04	\textbf{-0.26***}	\textbf{-0.12*}	\textbf{0.68***}	\textbf{0.44***}	\textbf{0.44***}	\
Partner masculinity	\textbf{0.15**}	-0.02	-0.09†	-0.06	\textbf{0.15**}	\textbf{0.17***}	\textbf{0.16**}	\
Partner dominance	0.06	-0.04	-0.06	-0.01	\textbf{0.12*}	\textbf{0.18***}	\textbf{0.12*}	\
Partner attractiveness	\textbf{0.14**}	-0.05	-0.05	-0.05	\textbf{0.16**}	\textbf{0.16**}	\textbf{0.18***}	\
Country safety	0.00	0.01	-0.02	-0.07	\textbf{0.13*}	-0.02	0.03	\
City safety	0.01	0.00	-0.02	\textbf{-0.11*}	\textbf{0.13*}	0.01	0.03	\
Neighborhood safety	0.08	0.08	-0.04	0.00	0.06	\textbf{-0.12*}	-0.04	(
Home safety	-0.02	0.04	-0.05	0.01	-0.01	0.01	-0.06	
Safety	0.02	0.06	-0.06	-0.06	\textbf{0.11*}	-0.05	-0.03	\
Frequency of robery	-0.07	-0.05	0.09†	-0.05	-0.06	-0.03	-0.06	\
Frequency of partner physical violence	\textbf{0.19***}	\textbf{0.24***}	0.05	0.07	-0.07	-0.04	-0.07	

Frequency of partner sexual violence	0.06	0.00	-0.06	-0.04	0.06	0.04	0.00
Frequency of partner infidelity	\textbf{0.23***}\textbf{0.17**}		0.00	0.00	-0.04	-0.07	-0.03

Note: Values represent Pearson correlation coefficients (r). For significance, $^{\dagger}p < 0.1$, $^{*}p < 0.05$, $^{**}p < 0.01$, $^{***}p < 0.001$. Significant correlations are in b

```r
# Manipulation check----
## Resource availability----

### Happiness----
mod_happ <- lm(Condition_happiness ~ Condition * Relationship_current, data = reg_fin)
Anova(mod_happ, type = 3)
```

```
## Anova Table (Type III tests)
##
## Response: Condition_happiness
##                               Sum Sq  Df   F value Pr(>F)
## (Intercept)                   4554.9   1 4588.5081 <2e-16 ***
## Condition                     1031.9   1 1039.5445 <2e-16 ***
## Relationship_current             0.7   1    0.7149 0.3984
## Condition:Relationship_current    1.7   1    1.7233 0.1901
## Residuals                      364.3 367
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
```

```r
### Physical safety----
mod_phys_safety <- lm(Condition_physical_safety ~ Condition * Relationship_current, data = reg_fin)
Anova(mod_phys_safety, type = 3)
```

```
## Anova Table (Type III tests)
##
## Response: Condition_physical_safety
##                               Sum Sq  Df   F value Pr(>F)
## (Intercept)                   4329.6   1 2757.7553 <2e-16 ***
## Condition                      801.5   1  510.5208 <2e-16 ***
## Relationship_current             1.9   1    1.2415 0.2659
## Condition:Relationship_current    2.3   1    1.4464 0.2299
## Residuals                      576.2 367
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
```

```r
### Health----
mod_health <- lm(Condition_healthy ~ Condition * Relationship_current, data = reg_fin)
Anova(mod_health, type = 3)
```

```
## Anova Table (Type III tests)
##
## Response: Condition_healthy
##                               Sum Sq  Df   F value Pr(>F)
## (Intercept)                   4690.9   1 3777.2510 <2e-16 ***
## Condition                      822.8   1  662.5301 <2e-16 ***
## Relationship_current             0.0   1    0.0142 0.9052
## Condition:Relationship_current    0.6   1    0.4538 0.5009
## Residuals                      455.8 367
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
```

```r
### Economic security----
mod_econ_sec <- lm(Condition_economic_security ~ Condition * Relationship_current, data = reg_fin)
Anova(mod_econ_sec, type = 3)
```

```
## Anova Table (Type III tests)
```

```
##
## Response: Condition_economic_security
##                               Sum Sq  Df   F value Pr(>F)
## (Intercept)                   4999.7   1 6806.6725 <2e-16 ***
## Condition                     1508.1   1 2053.1262 <2e-16 ***
## Relationship_current             0.0   1    0.0013 0.9710
## Condition:Relationship_current    0.9   1    1.1833 0.2774
## Residuals                       269.6 367
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
```

```
## Sexual dimorphism----
eval_desc <- eval_long |>
  left_join(quests_fin, by = c("ID")) |>
  mutate(Sexual_dimorphism = ifelse(grepl("F", Stimulus), "Feminine", "Masculine")) |>
  group_by(ID, Sexual_dimorphism, Relationship_current) |>
  summarise(Masculinity = mean(Masculinity),
            Attractiveness = mean(Attractiveness))
```

```
## `summarise()` has grouped output by 'ID', 'Sexual_dimorphism'. You can override
## using the `.groups` argument.
```

```
### Masculinity----
mod_masc <- lm(Masculinity ~ Sexual_dimorphism * Relationship_current, data = eval_desc)
Anova(mod_masc, type = 3)
```

```
## Anova Table (Type III tests)
##
## Response: Masculinity
##                                      Sum Sq  Df   F value Pr(>F)
## (Intercept)                          3187.8   1 1460.9800 <2e-16 ***
## Sexual_dimorphism                     955.0   1  437.6966 <2e-16 ***
## Relationship_current                    0.2   1    0.0814 0.7754
## Sexual_dimorphism:Relationship_current    2.3   1    1.0643 0.3026
## Residuals                            1553.5 712
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
```

```
### Attractiveness----
mod_attr <- lm(Attractiveness ~ Sexual_dimorphism * Relationship_current, data = eval_desc)
Anova(mod_attr, type = 3)
```

```
## Anova Table (Type III tests)
##
## Response: Attractiveness
##                                      Sum Sq  Df  F value Pr(>F)
## (Intercept)                          1522.98   1 462.8760 <2e-16 ***
## Sexual_dimorphism                     572.34   1 173.9485 <2e-16 ***
## Relationship_current                    0.18   1   0.0542 0.8160
## Sexual_dimorphism:Relationship_current    0.11   1   0.0328 0.8564
## Residuals                            2342.67 712
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
```