How do experiences of violence affect women's preferences for facial masculinity according to resource availability? An exploratory study using eye-tracking

Code and analyses

Milena Vásquez-Amézquita [1,3,*] Andrés Castellanos-Chacón [2]
Wendy Medina-Sarmiento [1] Valentina Cepeda [1] Marina Begoña Martínez-González [3]
Juan David Leongómez [2]

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[1] Faculty of Psychology, Universidad El Bosque, Bogota, Colombia.
[2] EvoCo: Human Behaviour and Evolution Lab, Faculty of Psychology, Universidad El Bosque, Bogota, Colombia
[3] Faculty of Psychology, Universidad de la Costa, Barranquilla, Colombia.

[*] Correspondence: mvasquezam@unbosque.edu.co

Description

This document contains all code, and step by step explanations for all analyses, figures and tables (including supplementary figures and tables) for:

Vásquez-Amézquita, M., Castellanos-Chacón, A., Medina-Sarmiento, W., Cepeda, V., Martínez-González, M. B., & Leongómez, J. D., (in prep). *How do experiences of violence affect women's preferences for facial masculinity according to resource availability? An exploratory study using eye-tracking.*

Data available from the Open Science Framework (OSF): https://doi.org/10.XXXXX/OSF.IO/XXXXX. All analyses were planned by Milena Vásquez-Amézquita and Juan David Leongómez. This document and its underlying code were created in `R Markdown` by Juan David Leongómez using LaTeX.

Contents

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1 Preliminaries

1.1 Load packages

This file was created using `knitr` (Xie, 2014), mostly using `tidyverse` (Wickham et al., 2019) syntax. As such, data wrangling was mainly done using packages such as `dplyr` (Wickham et al., 2023), and most figures were created or modified using `ggplot2` (Wickham, 2016). Tables were created using `knitr::kable` and `kableExtra` (Zhu, 2020).

Linear mixed models were fitted using `lmerTest` (Kuznetsova et al., 2017), assumptions were performed using `performance` (Lüdecke et al., 2021), contrasts and interactions were explored using `emmeans` (Lenth, 2024).

Used packages also include `osfr` (Wolen et al., 2020) to download and open data files directly from the Open Science Framework (OSF), using the `osf_retrieve_file` and `osf_download` functions.

All packages used in this file can be directly installed from the Comprehensive R Archive Network (CRAN). For a complete list of packages used to create this file, and their versions, see section 5, at the end of the document.

```
library(car)
library(MASS)
library(ggstats)
library(tidyverse)
library(ggpubr)
library(readxl)
library(lmerTest)
library(emmeans)
library(knitr)
library(kableExtra)
library(performance)
library(GGally)
library(scales)
library(factoextra)
library(FactoMineR)
library(gtools)
library(bbmle)
library(effectsize)
library(insight)
```

1.2 Custom functions

1.2.1 `pval.lev`

This function takes p-values and formats them in LaTeX, highlighting significant results in bold.

```
# Define a function 'pval.lev' to format p-values based on specific thresholds.
pval.lev <- function(pvals) {
  # If the p-value is less than 0.0001, return the string '\textbf{< 0.0001}'.
  ifelse(pvals < 0.0001,
    "\\textbf{< 0.0001}",
    # If the p-value is less than 0.001, return the string '\textbf{< 0.001}'.
    ifelse(pvals < 0.001,
      "\\textbf{< 0.001}",
      # If the p-value is less than 0.05, format it with bold text and round to 4
      # decimal places.
      ifelse(pvals < 0.05,
        paste0("\\textbf{", round(pvals, 4), "}"),
        # Otherwise, round the p-value to 2 decimal places.
        round(pvals, 2)
      )
    )
  )
}
```

1.2.2 `corr.stars`

This function creates a correlation matrix, and displays significance (function `corr.stars` modified from http://myowelt.blogspot.com/2008/04/beautiful-correlation-tables-in-r.html).

```
corr.stars <- function(x) {
  # Load the 'Hmisc' package, which is required for the 'rcorr' function.
  require(Hmisc)
  # Convert the input 'x' to a matrix in case it is not already.
  x <- as.matrix(x)
  # Compute the correlation matrix (R) and p-values (p) using the 'rcorr' function.
  R <- rcorr(x)$r # Correlation matrix
  p <- rcorr(x)$P # p-value matrix
  # Define significance levels for the stars notation.
  # *** for p < 0.001, ** for p < 0.01, * for p < 0.05, and † for p < 0.10.
  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 'Rnew' that contains the correlations and their significance stars.
  Rnew <- matrix(mystars,
    ncol = ncol(x)
  ) # Ensure the new matrix has the same number of columns as 'x'
  # Add the correlation values without stars to the diagonal (self-correlations).
  diag(Rnew) <- paste(diag(R), " ",
    sep = ""
  )
  # Set row names and column names of the matrix 'Rnew' to match those of the original matrix.
  rownames(Rnew) <- colnames(x)
  colnames(Rnew) <- paste(colnames(x), "", sep = "")
  # Remove the upper triangle and the diagonal of the matrix to avoid duplication.
  Rnew <- as.matrix(Rnew)
  Rnew[upper.tri(Rnew, diag = TRUE)] <- ""
  # Convert the matrix to a data frame for easier handling.
  Rnew <- as.data.frame(Rnew)
  # Remove the last column (empty column from the upper triangle) and return the result.
  Rnew <- cbind(Rnew[1:length(Rnew) - 1])
  # Return the final correlation matrix with significance stars.
  return(Rnew)
}
```

1.2.3 `lmer.anova.tab`

This function takes a model, and creates an ANOVA-type table of fixed effects, formatted in LaTeX.

```
lmer.anova.tab <- function(model) {

  r2 <- r2_nakagawa(model)

  tab <- anova(model) |>
    rownames_to_column(var = "Effect") |>
    mutate(Effect = str_replace_all(Effect, "_", " "),
           Effect = str_replace_all(Effect, ":", " × "),
```

```
          df = paste0(NumDF, ", ", round(DenDF, 2))) |>
    rename("F" = "F value",
           "p" = "Pr(>F)") |>
    mutate(F = round(F, 2),
           p = pval.lev(p)) |>
    select(Effect, F, df, p) |>
    add_row(Effect = paste0("Conditional = ", round(r2$R2_conditional, 2))) |>
    add_row(Effect = paste0("Marginal = ",signif(r2$R2_marginal, 2))) |>
    rename("FIxed effect" = "Effect",
           "\\textit{df}" = "df",
           "\\textit{F}" = "F",
           "\\textit{p}" = "p")

  caption <- paste0("ANOVA-type table of fixed effects for the ", find_response(model), " model")

  n_rows <- dim(tab)[1]

  taa <- kable(tab,
               digits = 2,
               booktabs = TRUE,
               align = c("l", rep("c", 3)),
               linesep = "",
               caption = caption,
               escape = FALSE) |>
    kable_styling(latex_options = c("HOLD_position", "scale_down")) |>
    pack_rows("Nakagawa's $R^2$",
              start_row = n_rows-1, end_row = n_rows,
              hline_after = TRUE, hline_before = TRUE,
              escape = FALSE) #|>
    #row_spec(n_rows-1, align = "right") |>
    #row_spec(row = 8, align = "right")
  return(taa)
}
```

1.3 Independent stimuli evaluation

The sex typicality of all stimuli was manipulated to either enhance or reduce their sex-typical characteristics. Since all the stimuli were male faces, this involved masculinizing them to increase their typical sex characteristics and feminizing them to reduce those characteristics. Masculinized and feminized versions were independently rated for masculinity and estimated age by a panel of raters (not participants).

```
# Load the 'Evaluacion Manipulación Rostros.xlsx' Excel file into a data frame
ext_val <- read_excel("Data/Evaluacion Manipulación Rostros.xlsx")
```

1.3.1 Masculinity ratings

First, masculinity rating given to the masculinized and feminized versions of each stimuli were compared.

```
# Select relevant columns and reshape the data into long format
masc_dat <- ext_val |>
  select(
    ResponseId,
    contains("M", ignore.case = FALSE), # Select columns that contain "M" (masculinity)
    -Menstruacion
  ) |> # Exclude the 'Menstruacion' (menstruation) column
  pivot_longer(
    cols = contains("M", ignore.case = FALSE), # Reshape to long format
```

```
    names_to = "Stimulus", # Column with stimuli names
    values_to = "Masculinity"
  ) |> # Column with masculinity ratings
  # Add a column indicating sexual dimorphism based on stimulus name
  mutate(Sexual_dimorphism = ifelse(grepl("f_1", Stimulus), "Feminine", "Masculine")) |>
  # Keep only the first 3 characters of the stimulus name
  mutate(Stimulus = str_sub(Stimulus, end = 3))

# Group by stimulus and perform t-tests for masculinity ratings across
# sexual dimorphism categories
t_masc <- masc_dat |>
  group_by(Stimulus) |>
  summarise(
    t = round(t.test(Masculinity ~ Sexual_dimorphism)$statistic, 2), # Compute t values
    p = pval.lev(t.test(Masculinity ~ Sexual_dimorphism)$p.value)
  ) |> # Compute p-value
  ungroup()

# Select the first 10 rows of the data 't_masc'
t_masc[1:10, ] |>
  # Add the next 10 rows (11 to 20) as additional columns
  cbind(t_masc[11:20, ]) |>
  # Add the next 10 rows (21 to 30) as additional columns
  cbind(t_masc[21:30, ]) |>
  # Create a table using the 'kable' function
  kable(
    booktabs = TRUE, # Use 'booktabs' style for better-looking tables in LaTeX
    digits = 2, # Round numerical values to 2 decimal places
    align = "c", # Center align all columns
    linesep = "", # No lines between rows
    caption = "Difference in independent masculinity ratings given to each stimulus,
               according to its sexual dimorphism manipulation (feminized - masculinized)",
    # Caption for the table
    escape = FALSE, # Allow LaTeX commands in the table (e.g., italic or bold)
    col.names = rep(c("Stimulus", "\\textit{t}", "\\textit{p}"), times = 3) # Column names
  ) |>
  # Apply additional LaTeX styling to the table using 'kable_styling'
  kable_styling(
    latex_options = c("HOLD_position", "scale_down") # Keep table position
  ) |>
  # Add vertical lines after the 3rd and 6th columns using 'column_spec'
  column_spec(c(3, 6), border_right = TRUE) |>
  # Add a footnote with specific formatting
  footnote(
    general = "Tests are Welch's \\\\textit{t}-test. Significant results are in bold.",
    # General footnote text with LaTeX formatting
    threeparttable = TRUE, # Enable three-part table for better layout
    footnote_as_chunk = TRUE, # Render footnote as a chunk
    escape = FALSE # Allow LaTeX commands in the footnote
  )
```

Table S1. *Difference in independent masculinity ratings given to each stimulus, according to its sexual dimorphism manipulation (feminized - masculinized)*

Stimulus	*t*	*p*	Stimulus	*t*	*p*	Stimulus	*t*	*p*
A01	-6.09	< **0.0001**	A11	-6.98	< **0.0001**	A21	-7.81	< **0.0001**
A02	-9.05	< **0.0001**	A12	-7.90	< **0.0001**	A22	-10.53	< **0.0001**
A03	-8.96	< **0.0001**	A13	-10.32	< **0.0001**	A23	-6.83	< **0.0001**
A04	-8.04	< **0.0001**	A14	-7.76	< **0.0001**	A24	-6.61	< **0.0001**
A05	-9.81	< **0.0001**	A15	-10.33	< **0.0001**	A25	-8.18	< **0.0001**
A06	-7.45	< **0.0001**	A16	-10.63	< **0.0001**	A26	-8.60	< **0.0001**
A07	-7.04	< **0.0001**	A17	-7.76	< **0.0001**	A27	-6.55	< **0.0001**
A08	-9.05	< **0.0001**	A18	-10.29	< **0.0001**	A28	-7.79	< **0.0001**
A09	-12.18	< **0.0001**	A19	-8.27	< **0.0001**	A29	-11.25	< **0.0001**
A10	-6.53	< **0.0001**	A20	-9.72	< **0.0001**	A30	-11.47	< **0.0001**

Note: Tests are Welch's *t*-test. Significant results are in bold.

1.3.2 Age ratings

Then, estimated age of stimuli was assessed.

```
# Process age-related data: select relevant columns and reshape into long format
age_dat <- ext_val |>
  select(
    ResponseId,
    contains("E", ignore.case = FALSE)
  ) |> # Select columns related to estimated age (E)
  select(-c(2:5)) |> # Exclude columns 2 to 5 (irrelevant for this analysis)
  pivot_longer(
    cols = contains("E", ignore.case = FALSE), # Reshape to long format
    names_to = "Stimulus", # Column with stimuli names
    values_to = "Age"
  ) |> # Column with age estimates
  # Add sexual dimorphism category based on stimulus name
  mutate(Sexual_dimorphism = ifelse(grepl("f_1", Stimulus), "Feminine", "Masculine")) |>
  # Keep only the first 3 characters of the stimulus name
  mutate(Stimulus = str_sub(Stimulus, end = 3))

# Summarize age data: compute mean, standard deviation, minimum, and maximum age
sum_age_dat <- age_dat |>
  summarise(
    Mean = mean(Age, na.rm = TRUE), # Mean age
    SD = sd(Age, na.rm = TRUE), # Standard deviation of age
    Min = min(Age, na.rm = TRUE), # Minimum age
    Max = max(Age, na.rm = TRUE)
  ) # Maximum age
```

1.3.2.1 Histogram of perceived age

Distribution of the estimated ages.

```
# Create a histogram of estimated age
ggplot(age_dat, aes(x = Age)) +
  geom_histogram(bins = 26, fill = "#6D9EC1", color = "black") + # Plot histogram with 26 bins
  labs(
    x = "Estimated Age", # X-axis label
    y = "Count"
  ) + # Y-axis label
  scale_x_continuous(breaks = seq(15, 40, 5)) # X-axis scale with breaks every 5 units
```

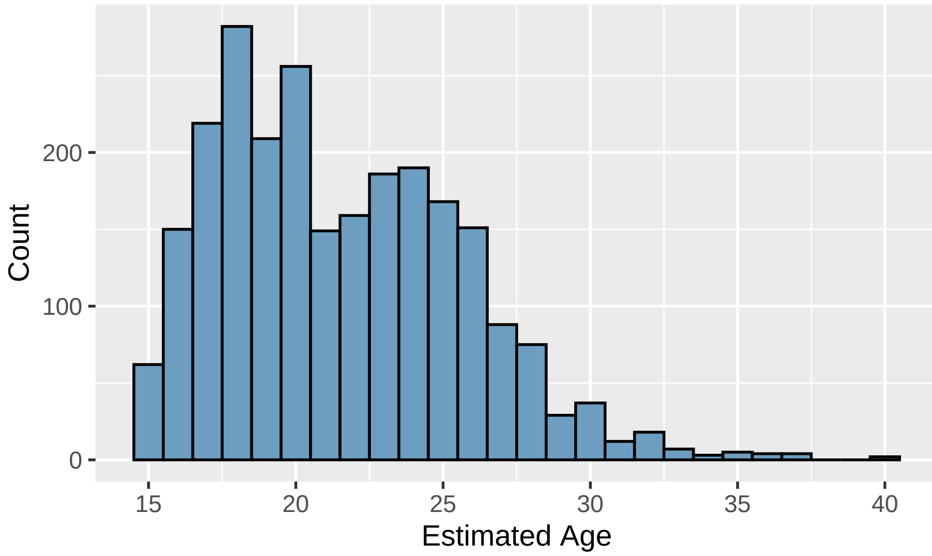

Figure S1. Histogram of estimated age of stimuli by an independent panel of raters. Age estimations were between 15 and 40 with a mean of 21.53 ± 4.11.

1.4 Load and wrangle main experiment data

1.4.1 Individual databases (by data type/source)

```
# Load the 'CUC-UB' sheet from the 'BD-ET-CUC-UB.xlsx' dataset
dat_et <- read_excel("Data/BD-ET-CUC-UB.xlsx",
  sheet = "CUC-UB"
) |>
  # Drop unused columns
  select(-c(
    Participant, Condicion, TOI, Interval, Media_respuesta, AOI,
    AOI_Global, Respuesta, Number_of_mouse_clicks...17,
    Time_to_first_mouse_click...18, AOI_respuesta
  )) |>
  # Rename columns (to English)
  rename(
    ID = Recording,
    University = UNIVERSIDAD,
    Stimulus = Media,
    Condition = Condición,
    Relationship = Contexto,
    Sexual_dimorphism = Rostro,
    TFD = 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,
    DFF = Duration_first_fixation
  ) |>
  # Convert character columns to factors
  mutate(across(where(is.character), as.factor)) |>
  # Recode factor levels to more meaningful English labels
  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"
    )
  ) |>
  # Modify 'Stimulus' column to include 'F' for Feminized and 'M' for Masculinized
  mutate(
    Stimulus = ifelse(Sexual_dimorphism == "Feminized",
      paste0(str_sub(str_replace(Stimulus, ".* - ", ""), 1, 2), "F"),
      ifelse(Sexual_dimorphism == "Masculinized",
        paste0(str_sub(str_replace(Stimulus, ".* - ", ""), 1, 2), "M"),
        Stimulus
      )
    ),
    # Create a new column 'Choice' to indicate whether there was a mouse click
    Choice = ifelse(NMC == 0, "No", "Yes")
  )
```

1.4.1.1 Eye-tracking data

1.4.1.2 Questionnaires This was loaded without calculating total instrument scores (for now), to test internal consistency

```
quests <- read_excel("Data/Cuestionario Datos Sociodemográficos  (Disponibilidad) (respuestas) (1).xlsx",
  sheet = "Respuestas de formulario 1"
) |>
  # Drop unnecessary columns (such as 'Invitado', 'Servicios ayuda', and 'Correos cierre')
  select(-c(Invitado, `Servicios ayuda`, `Correos cierre`)) |>
  # Rename columns for better readability
  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"
  ) |>
  # Recode the factor levels of several categorical variables
  mutate(
    Education = factor(Education, levels = c(
      "Primaria",
      "Bachillerato",
      "Universitario",
      "Posgrado"
    )),
    Sexual_orientation = factor(Sexual_orientation,
      levels = c(
        "Exclusivamente heterosexual",
        "Principalmente heterosexual, con contactos homosexuales esporádicos",
        "Predominantemente heterosexual, aunque con contactos homosexuales más que esporádicos",
        "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 personas"
      )
    ),
    Internet_use = factor(Internet_use,
      levels = c("Cada día", "Cada mes", "Cada año")
    ),
    Socioeconomic_level = as.factor(Socioeconomic_level)
  ) |>
  # Recode City variable to simplify geographical information
  mutate(City = ifelse(City %in% c(
    "Bogotá D.C.", "Madrid, Cundinamarca", "Zipaquirá, Cundinamarca",
    "Zipaquirá", "Mosquera, cundinamarca", "Mosquera",
    "FUNZA, CUNDINAMARCA", "Madrid Cundinamarca", "Une- Cundinamarca"
  ),
  "Bogota Region",
  ifelse(City %in% c(
    "Soledad", "Barranquilla", "BARRANQUILLA",
    "Soledad, Atlantico", "Costa Atlantica", "Corozal"
  ),
  "Atlantico Region",
  "Other"
  )
  )) |>
  # Recode several factors from Spanish to English for easier interpretation
  mutate(Education = recode(Education,
    "Primaria" = "Primary school",
    "Bachillerato" = "High school",
    "Universitario" = "University",
    "Posgrado" = "Postgraduate"
  )) |>
  # Additional recoding of variables
  mutate(Sexual_orientation = recode(Sexual_orientation,
    "Exclusivamente heterosexual" =
      "Exclusively heterosexual",
    "Principalmente heterosexual, con contactos homosexuales esporádicos" =
      "Predominantly heterosexual",
    "Predominantemente heterosexual, aunque con contactos homosexuales más que esporádicos" =
      "Predominantly heterosexual, but more than incidentally homosexual",
    "Bisexual" = "Bisexual",
    "Pansexual" = "Pansexual",
    "Demisexual" = "Demisexual"
  )) |>
  mutate(Relationship_status = recode(Relationship_status,
    "Soltero sin contactos sexuales en el último año" =
      "Single without sexual contacts",
    "Soltero con contactos sexuales en el último año" =
      "Single with sexual contacts",
    "Relación exclusiva o matrimonio - viven juntos" =
      "Exclusive relationship - cohabitating",
    "Relación exclusiva - no viven juntos" =
```

```
    "Exclusive relationship - not cohabitating",
  "Relación no exclusiva - contactos sexuales con otras personas" =
    "Non-exclusive relationship"
)) |>
mutate(Internet_use = recode(Internet_use,
  "Cada día" = "Daily",
  "Cada mes" = "Monthly",
  "Cada año" = "Yearly"
)) |>
# Recode several questions related to danger perceptions, replacing Spanish responses with
# numerical values.
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
  )
)) |>
# Replace Spanish responses with corresponding English values
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",
  "Both as child and adult"
))) |>
mutate(across(where(is.character), ~ replace(
  ., . ==
    "Sí, más de una vez en mi infancia",
  "More than once as child"
))) |>
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, Providencia y Santa Catalina",
  "Raizal"
))) |>
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"
  )))
```

1.4.1.2.1 Principal component analysis (PCA) To test whether it was possible to reduce the number of socio-ecological variables, we performed PCAs using the package FactoMineR (Lê et al., 2008), and plotted its results with function from the package factoextra (Kassambara & Mundt, 2020).

Socio-ecological factors PCA

```
# Select relevant columns for PCA from the 'quests' dataset
quests_pca_gen <- quests |>
  select(
    ID, # Unique identifier
    Men_perceived_as_danger_to_partner,
    Men_perceived_as_danger_to_children,
    Freq_partner_physical_violence,
    Freq_partner_sexual_violence,
    Freq_partner_infidelity,
    Perceived_home_safety
  ) |>
  # Rename columns: replace "Freq_" with "Frequency of"
  rename_with(~ str_replace_all(., "Freq_", "Frequency of")) |>
  # Replace underscores with spaces in column names
  rename_with(~ str_replace_all(., "_", " ")) |>
  # Capitalize the first letter of each column name
  rename_with(~ str_to_sentence(.))

# Perform PCA on the selected variables (excluding the ID column)
pca_sef <- PCA(quests_pca_gen[, -1], graph = FALSE)

# Display summary of the PCA results
pca_sef$var$cor |>
  # Create a table using the 'kable' function
  kable(
    booktabs = TRUE, # Use 'booktabs' style for better-looking tables in LaTeX
    digits = 2, # Round numerical values to 2 decimal places
    align = "c", # Center align all columns
    linesep = "", # No lines between rows
    caption = "Correlation between variables and PCA dimensions",
    # Caption for the table
    escape = FALSE, # Allow LaTeX commands in the table (e.g., italic or bold)
  ) |>
  # Apply additional LaTeX styling to the table using 'kable_styling'
  kable_styling(
    latex_options = c("HOLD_position", "scale_down") # Keep table position
  )
```

Table S2. *Correlation between variables and PCA dimensions*

	Dim.1	Dim.2	Dim.3	Dim.4	Dim.5
Men perceived as danger to partner	0.89	-0.27	-0.03	-0.13	0.01
Men perceived as danger to children	0.89	-0.25	-0.04	-0.11	0.03
Frequency ofpartner physical violence	0.37	0.63	0.20	0.15	-0.63
Frequency ofpartner sexual violence	0.31	0.42	-0.48	0.61	0.35
Frequency ofpartner infidelity	0.19	0.59	0.54	-0.32	0.48
Perceived home safety	0.05	-0.37	0.69	0.61	0.06

Summary plot

```
# Arrange two plots side by side:
# 1. A scree plot showing the explained variance for each principal component
# 2. A plot showing the variable loadings on the principal components
ggarrange(
  fviz_eig(pca_sef, addlabels = TRUE, barfill = "#00AFBB") +
    labs(
      title = "PCA: Socio-ecological factors", # Title for the scree plot
      subtitle = "Scree plot" # Subtitle for the scree plot
    ),
  fviz_pca_var(pca_sef,
    col.var = "#00AFBB", # Color the variable loadings in teal
    repel = TRUE # Avoid overlapping labels
  ) +
    labs(
      title = NULL, # No title for the loading plot
      subtitle = "Loadings" # Subtitle for the loading plot
    ),
  labels = "auto"
)
```

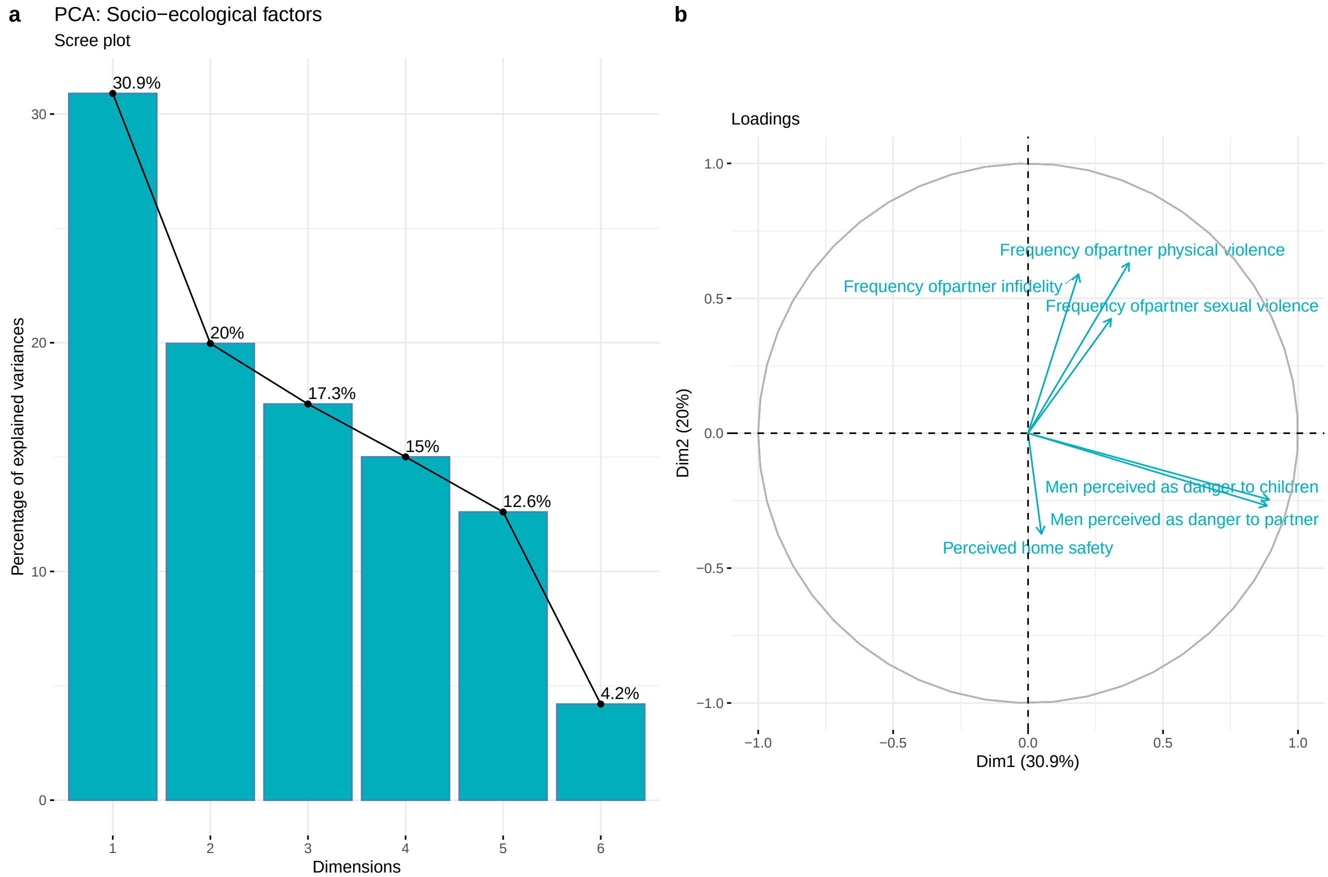

Figure S2. Summary of the PCA for all socio-ecological factors. **a.** Scree plot. **b.** Factor loadings.

When including all socio-ecological factors, the only variables that strongly correlate between them and with the PCA dimension (Table **??**; Fig. S2), are the two variables that evaluate participant's perception of men as dangerous to children and to their partner.

Because of this, a new PCA was performed or only these two variables, to calculate a score of Men perceived as dangerous. All remaining socio-ecological variables were kept.

Men perceived as dangerous

```
# Select relevant columns for PCA from the 'quests' dataset
quests_pca <- quests |>
  select(
    ID,
    Men_perceived_as_danger_to_partner,
    Men_perceived_as_danger_to_children
  ) |>
  # Rename columns: remove "Men_perceived_as_danger_to_"
  rename_with(~ str_remove_all(., "Men_perceived_as_danger_to_")) |>
  # Capitalize the first letter of each column name
  rename_with(~ str_to_sentence(.))


# Perform PCA on the selected variables (excluding the ID column)
pca_mpd <- PCA(quests_pca[, -1], graph = FALSE)

# Calculate score for the men perceived as dangerous dimension
mpd_scores <- data.frame(pca_mpd$ind$coord)$Dim.1
```

```
# Display summary of the PCA results
pca_mpd$var$cor |>
  # Create a table using the 'kable' function
  kable(
    booktabs = TRUE, # Use 'booktabs' style for better-looking tables in LaTeX
    digits = 2, # Round numerical values to 2 decimal places
    align = "c", # Center align all columns
    linesep = "", # No lines between rows
    caption = "Correlation between variables and PCA dimensions",
    # Caption for the table
    escape = FALSE, # Allow LaTeX commands in the table (e.g., italic or bold)
  ) |>
  # Apply additional LaTeX styling to the table using 'kable_styling'
  kable_styling(
    latex_options = c("HOLD_position", "scale_down") # Keep table position
  )
```

Table S3. *Correlation between variables and PCA dimensions*

	Dim.1	Dim.2
Partner	0.93	0.36
Children	0.93	-0.36

Summary plot

In fact, the two variables related to men perceived as dangerous, could be reduced to a single dimension, that captured over 87% of the variance.

```
# Arrange two plots side by side:
# 1. A scree plot showing the explained variance for each principal component
# 2. A plot showing the variable loadings on the principal components
ggarrange(
  fviz_eig(pca_mpd, addlabels = TRUE, barfill = "#00AFBB") +
    labs(
      title = "PCA: Men perceived as danger to...", # Title for the scree plot
      subtitle = "Scree plot" # Subtitle for the scree plot
    ),
  fviz_pca_var(pca_mpd,
    col.var = "#00AFBB", # Color the variable loadings in teal
    repel = TRUE # Avoid overlapping labels
  ) +
    labs(
      title = NULL, # No title for the loading plot
      subtitle = "Loadings" # Subtitle for the loading plot
    ),
  labels = "auto"
)
```

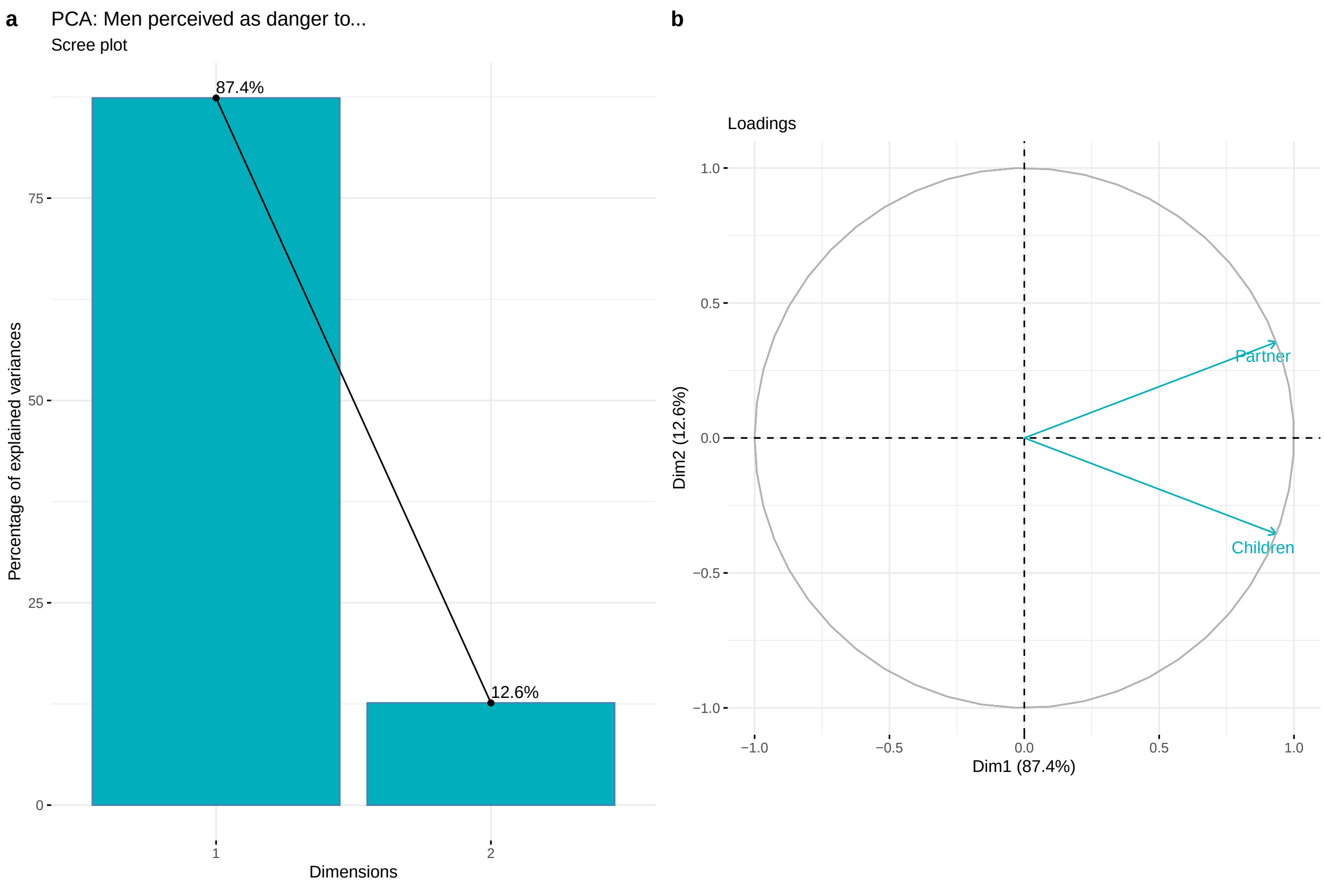

Figure S3. Summary of the PCA for factors related to men perceived as dangerous. **a.** Scree plot. **b.** Factor loadings.

1.4.1.2.2 Clean questionnaire data

Less columns, with total instrument scores

```r
# Clean and modify the 'quests' dataset
quests_clean <- quests |>
  # Recode values in columns that start with "Escasez alimentaria"
  mutate(across(
    starts_with("Escasez alimentaria"),
    ~ recode(.,
      "Nunca" = 0, # Recode "Nunca" to 0
      "Rara vez/algunas veces" = 1, # Recode "Rara vez/algunas veces" to 1
      "Casi siempre" = 2 # Recode "Casi siempre" to 2
    )
  )) |>
  # Perform row-wise operations
  rowwise() |>
  # Create new variables by summing up specific columns
  mutate(
    # Calculate Self-esteem score by summing relevant items (with reverse scoring)
    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
    ),
    # Calculate Self-perception score by summing columns that start with "SP_"
    Self_perception = sum(across(starts_with("SP_"))),
```

```
    # Calculate Perceived safety by summing columns that end with "_safety"
    Perceived_safety = sum(across(ends_with("_safety"))),
    # Calculate Food insecurity by summing columns that start with "Escasez alimentaria"
    Food_insecurity = sum(across(starts_with("Escasez alimentaria")))
  ) |>
  # Remove columns that start with "autoestima_"
  select(!starts_with("autoestima_")) |>
  # Convert character columns to factors
  mutate(across(where(is.character), as.factor)) |>
  # Bind the column 'Men_perceived_as_dangerous' from 'mpd_scores' (PCA scores)
  bind_cols(Men_perceived_as_dangerous = mpd_scores)
```

1.4.1.3 Subjective evaluation of stimuli

```
# Load the subjective evaluation dataset, removing the last two columns (123 and 124)
eval <- read_excel("Data/Evaluación subjetiva rostros (Respuestas).xlsx") |>
  select(-c(123:124)) |>
  # Perform row-wise operations to compute new variables
  rowwise() |>
  # Calculate the sum of masculinity and attractiveness ratings for both masculinized and
  # feminized stimuli
  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 columns for clarity
  rename(
    Date = "Marca temporal",
    ID = "Escribe tu código de participante"
  )
```

1.4.1.3.1 Wide format

```
# Create a long format dataset by combining attractiveness and masculinity ratings
eval_long <- left_join(
  # First, select relevant columns and pivot the attractiveness ratings to long format
  eval |>
    select(-c(123:126)) |> # Remove unnecessary columns
    select(!ends_with(" Mas")) |> # Exclude masculinity-related columns
    pivot_longer(
      cols = ends_with("Atr"), # Pivot attractiveness ratings to long format
      names_to = "Stimulus",
      values_to = "Attractiveness"
    ) |>
    mutate(Stimulus = str_remove_all(Stimulus, " Atr")), # Clean the Stimulus names
  # Next, pivot the masculinity ratings to long format
  eval |>
    select(-c(123:126)) |> # Remove unnecessary columns
    select(!ends_with(" Atr")) |> # Exclude attractiveness-related columns
    pivot_longer(
      cols = ends_with("Mas"), # Pivot masculinity ratings to long format
      names_to = "Stimulus",
```

```
      values_to = "Masculinity"
    ) |>
    mutate(Stimulus = str_remove_all(Stimulus, " Mas")) # Clean the Stimulus names
)
```

1.4.1.3.2 Long format

```
reg <- rbind(
  read_excel("Data/3Registro Participantes Disponibilidad de Recursos-corregido.xlsx",
    sheet = "UB"
  ) |>
    mutate(University = "UB"),
  read_excel("Data/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`,
    Consentimiento, `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))
```

1.4.1.4 Resource availability

1.4.2 Full, final database

```
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")
```

1.4.2.1 Join data files

1.4.2.2 Filtered database Filtered database to exclude participants who did responded the two control questions correctly, were ovulating, or did not report being exclusively heterosexual.

```
dat <- dat_int |>
  # Filter out rows where Control_question_1 and Control_question_2 are both "No",
  # Ovulating is not "Yes", and Sexual_orientation is "Exclusively heterosexual"
  filter(Control_question_1 == "No" &
    Control_question_2 == "No" &
    Ovulating != "Yes" &
    Sexual_orientation == "Exclusively heterosexual") |>
  # Remove all occurrences of the letter "F" from the Stimulus column
  # (infomation already in the column Sexual_dimorphism)
  mutate(Stimulus = str_remove_all(Stimulus, "F")) |>
  # Remove all occurrences of the letter "M" from the Stimulus column
  # (infomation already in the column Sexual_dimorphism)
  mutate(Stimulus = str_remove_all(Stimulus, "M")) |>
  # Ensure that the resulting data frame is ungrouped
  ungroup()
```

After filtering the database and removing data who did not meet these criteria, from an initial sample size of 499 women, the final database contained data from 293 exclusively heterosexual participants, who were not ovulating.

1.4.3 Final individual databases filtered to the final sample

```
reg_fin <- reg |>
  left_join(quests_clean, by = c("ID")) |>
  filter(ID %in% unique(dat$ID))
```

1.4.3.1 Resource availability (filtered)

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

1.4.3.2 Questionnaires (filtered)

1.4.3.3 Differences in fixations to masculinized and feminized stimuli To test bias in fixation patterns according to the sexual dimorphism manipulation, difference scores (masculinized - feminized) were calculated

```
dat_dif <- dat |>
  group_by(ID,
           Stimulus,
           Condition,
           Relationship,
           Sexual_orientation,
           Freq_partner_physical_violence,
           Freq_partner_sexual_violence,
           Freq_partner_infidelity,
           Relationship_current,
           Men_perceived_as_dangerous) |>
  summarise(DFF_dif = DFF[Sexual_dimorphism == "Masculinized"] -
              DFF[Sexual_dimorphism == "Feminized"],
            TFD_dif = TFD[Sexual_dimorphism == "Masculinized"] -
              TFD[Sexual_dimorphism == "Feminized"],
            NF_dif = NF[Sexual_dimorphism == "Masculinized"] -
              NF[Sexual_dimorphism == "Feminized"],
            Attr_dif = Attractiveness[Sexual_dimorphism == "Masculinized"] -
              Attractiveness[Sexual_dimorphism == "Feminized"],
            Masc_dif = Masculinity[Sexual_dimorphism == "Masculinized"] -
              Masculinity[Sexual_dimorphism == "Feminized"]) |>
  ungroup() |>
  mutate(across(where(is.character), as.factor))
```

2 Descriptives

2.1 Number and age of participants in each condition

```
dat |>
  group_by(ID) |>
  summarise(
    Age = first(Age),
    Condition = first(Condition)
  ) |>
  ungroup() |>
  group_by(Condition) |>
  summarise(
    n = n_distinct(ID),
    Mean = mean(Age, na.rm = TRUE),
    SD = sd(Age, na.rm = TRUE),
    Min = min(Age, na.rm = TRUE),
    Max = max(Age, na.rm = TRUE)
  ) |>
  kable(
    booktabs = TRUE, # Use 'booktabs' style for better-looking tables in LaTeX
    digits = 2, # Round numerical values to 2 decimal places
    align = "c", # Center align all columns
    linesep = "", # No lines between rows
    caption = "Number and age of participants in each condition",
    # Caption for the table
    escape = FALSE, # Allow LaTeX commands in the table (e.g., italic or bold)
```

```
    col.names = c(
      "Condition",
      "\\textit{n}",
      "Mean",
      "SD",
      "Min.",
      "Max."
    )
  ) |>
  # Apply additional LaTeX styling to the table using 'kable_styling'
  kable_styling(
    latex_options = c("HOLD_position", "scale_down") # Keep table position
  )
```

Table S4. *Number and age of participants in each condition*

Condition	*n*	Mean	SD	Min.	Max.
High	165	21.41	2.25	18	27
Low	128	21.50	2.25	18	25

2.2 Select and wrangle data for descriptive plots

```
# Create desc_quest, combining and transforming quests_fin and reg
desc_quest <-
  # Join the quests_fin and reg dataframes by ID
  quests_fin |>
  left_join(reg, by = c("ID")) |>
  # Select only the desired columns
  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,
    Victim_of_violence,
    Victim_of_gender_violence:Victim_of_armed_conflict,
    Self_esteem:Men_perceived_as_dangerous,
    Freq_partner_physical_violence,
    Freq_partner_infidelity,
    Partner_physical_violence,
    Partner_sexual_violence,
    Freq_partner_sexual_violence,
    # Food security variables (transformed later)
    "Escasez alimentaria1":"Escasez alimentaria5"
  ) |>
  # Transform all 'Escasez alimentaria' (food scarcity) columns into categorical variables with
  # specific levels.
  mutate(
```

```
    across(
      starts_with("Escasez alimentaria"),
      ~ recode(.,
        "0" = "Never",
        "1" = "Rarely/sometimes",
        "2" = "Almost always"
      )
    ),
    # Convert character variables to factor for clarity and consistency.
    across(where(is.character), as.factor),
    # Sort factor levels
    across(
      starts_with("Escasez alimentaria"),
      ~ factor(.,
        levels = c(
          "Never",
          "Rarely/sometimes",
          "Almost always"
        )
      )
    )
  )
```

2.3 Distribution of values across variables

2.3.1 Sociodemographic variables

```
# Create a plot that displays the distribution of sociodemographic factors
# by condition, with subplots for numeric and categorical variables.
ggarrange(
  # Plot a: Distribution of values across numeric sociodemographic variables
  desc_quest |>
    select(ID, Condition, Age, Number_of_children) |>
    # Convert data from long to wide format to prepare for plotting
    pivot_longer(where(is.numeric),
                 names_to = "Variable",
                 values_to = "Value") |>
    # Clean and transform the variable names by replacing underscores with spaces
    mutate(Variable = str_replace_all(Variable, "_", " ")) |>
    # Create a plot of density distributions for numeric variables,
    # colored and filled by condition
    ggplot(aes(x = Value, fill = Condition, color = Condition)) +
    geom_density(alpha = 0.3) +  # Use semi-transparent density curves
    facet_wrap(~Variable, scales = "free", ncol = 1) +  # Display variables in separate panels
    stat_summary(aes(xintercept = after_stat(x), y = 0),
                 fun = mean, geom = "vline", orientation = "y") +  # Add vertical lines at mean
    labs(x = NULL, y = NULL),  # Remove axis labels for this panel
  # Plot b: Proportional number of participants across categorical variables
  desc_quest |>
    select(ID, Condition, City, Ethnicity,
           Education, Relationship_current, Relationship_status) |>
    # Convert data from long to wide format to prepare for plotting
    pivot_longer(City:Relationship_status,
                  names_to = "Variable",
                  values_to = "Value") |>
    # Clean and transform the variable names by replacing underscores with spaces
```

```
    mutate(Variable = str_replace_all(Variable, "_", " ")) |>
    # Create a plot of bar charts for categorical variables,
    # colored and filled by condition
    ggplot(aes(y = Value, fill = Condition, color = Condition)) +
    geom_bar(alpha = 0.3, position = position_dodge()) +  # Use semi-transparent bars
    # Add text labels to display proportional values as percentages
    geom_text(aes(label = scales::percent(after_stat(prop), accuracy = 0.1)),
                xjust = "inward",
                position = position_dodge(.9),
                stat = "prop",
                color = "black",
                size = 3) +
    facet_wrap(~Variable, scales = "free") +  # Display variables in separate panels
    scale_y_discrete(labels = label_wrap(20)) +  # Wrap long labels for categorical axes
    theme(axis.text.y = element_text(size = 8)) +  # Reduce font size for y-axis text
    labs(x = NULL, y = NULL),  # Remove axis labels for this panel
  # Arrange subplots into a grid with specified widths and share legends
  widths = c(1, 3),
  common.legend = TRUE,
  legend = "bottom",
  labels = "auto"
)
```

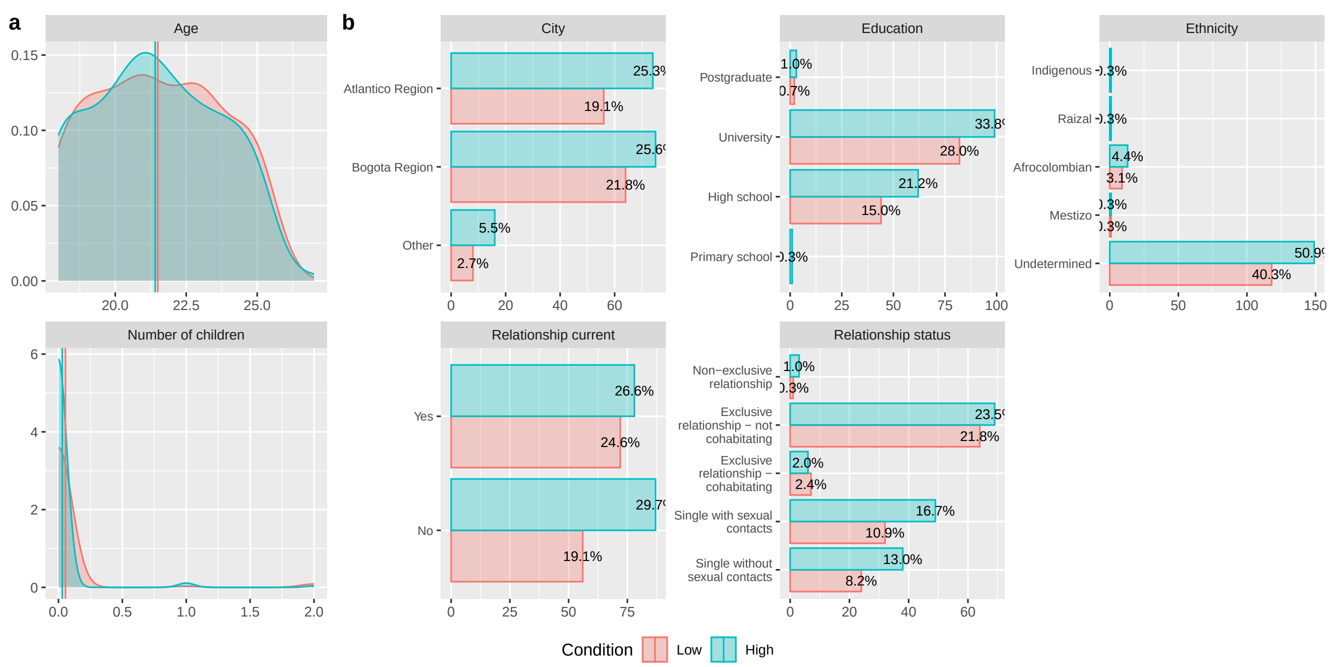

Figure S4. Distribution of values across sociodemographic variables, by condition. **a.** Distribution of values across numeric sociodemographic variables. Colored vertical lines indicate the mean value for each variable under each condition. **b.** Proportional number of participants across categorical variables.

2.3.2 Access to resources

```
# Create a plot that displays the distribution of socioeconomic factors
# by condition.
ggarrange(
  # Select relevant variables from the dataset (desc_quest)
  desc_quest |>
```

```
  select(ID, Condition,
         Socioeconomic_level, Electricity, Internet_access, Internet_use,
         TV, Hospital_access) |>
  # Convert data from long to wide format to prepare for plotting
  pivot_longer(Socioeconomic_level:Hospital_access,
               names_to = "Variable",
               values_to = "Value") |>
  # Clean and transform the variable names by replacing underscores with spaces
  mutate(Variable = str_replace_all(Variable, "_", " ")) |>
  # Create a plot of bar charts for socioeconomic variables,
  # colored and filled by condition
  ggplot(aes(y = Value, fill = Condition, color = Condition)) +
  geom_bar(alpha = 0.3, position = position_dodge()) +  # Use semi-transparent bars
  # Add text labels to display proportional values as percentages
  geom_text(aes(label = scales::percent(after_stat(prop), accuracy = 0.1)),
             xjust = "inward",
             position = position_dodge(.9),
             stat = "prop",
             color = "black",
             size = 3) +
  facet_wrap(~Variable, scales = "free") +  # Display variables in separate panels
  scale_y_discrete(labels = label_wrap(20)) +  # Wrap long labels for categorical axes
  theme(axis.text.y = element_text(size = 8)) +  # Reduce font size for y-axis text
  labs(x = NULL, y = NULL),  # Remove axis labels
  # Arrange subplots into a grid with specified widths and share legends
  widths = c(1, 3),
  common.legend = TRUE,
  legend = "bottom"
)
```

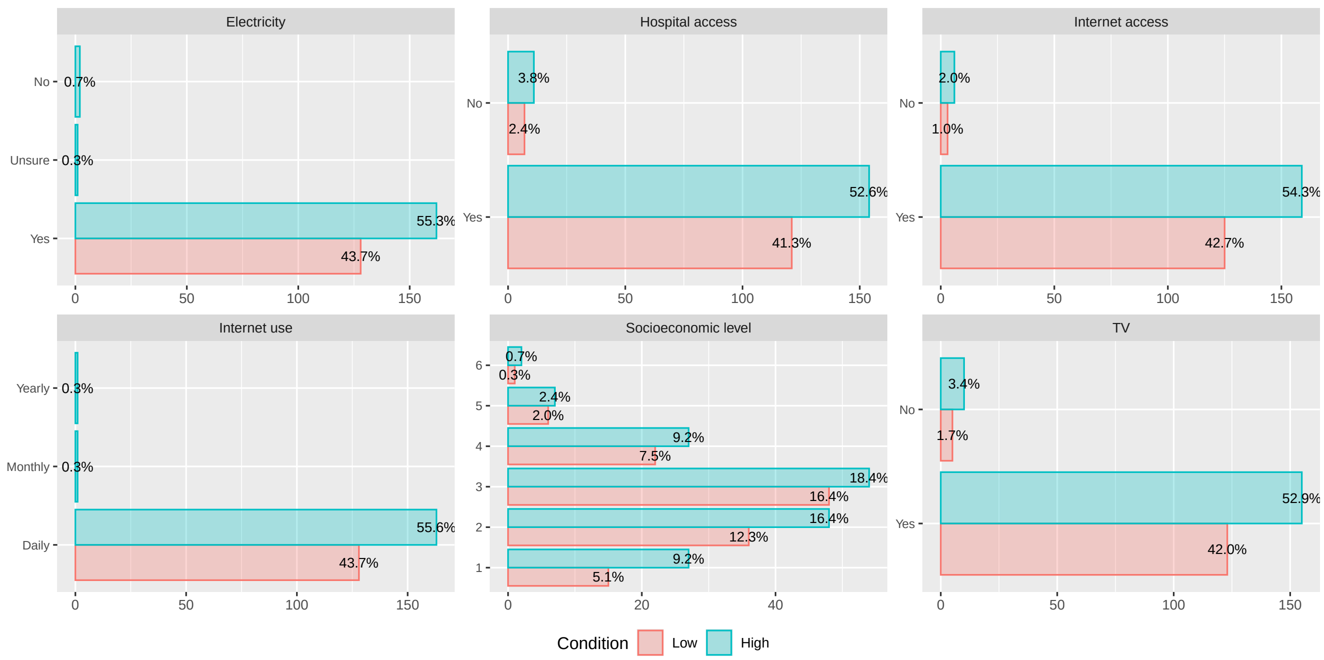

Figure S5. Proportional number of participants across categorical variables that measure access to resources.

2.3.3 Health-related variables

```
ggarrange(
  # Select relevant columns from desc_quest and pivot them into a long format
  desc_quest |>
    select(ID, Condition, Freq_illness, SP_health) |>
  # Convert the Frequency of illness and Self-perceived health columns into separate rows
  pivot_longer(Freq_illness:SP_health,
               names_to = "Variable",
               values_to = "Value") |>
  # Clean up variable names by replacing underscores with spaces
  mutate(Variable = str_replace_all(Variable, "_", " ")) |>
  # Rename variables
  mutate(Variable = str_replace_all(Variable, "Freq", "Frequency of")) |>
  mutate(Variable = str_replace_all(Variable, "SP", "Self-perceived")) |>
  # Convert the Value column to numeric
  mutate(Value = as.numeric(Value)) |>
  # Create a ggplot object
  ggplot(aes(x = Value, fill = Condition, color = Condition)) +
  # Plot density curves for each condition within each variable
  geom_density(alpha = 0.3) +
  # Divide the plot into facets by Variable
  facet_wrap(~Variable) +
  # Add vertical lines to indicate mean values for each group
  stat_summary(aes(xintercept = after_stat(x), y = 0),
               fun = mean, geom = "vline", orientation = "y") +
  # Set up plot labels and title with NULL values for x and y axes.
  labs(x = NULL, y = "Density"),
  # Specify the widths of the two columns and common legend position (bottom)
  widths = c(2, 1),
  common_legend = TRUE,
  legend = "bottom")
```

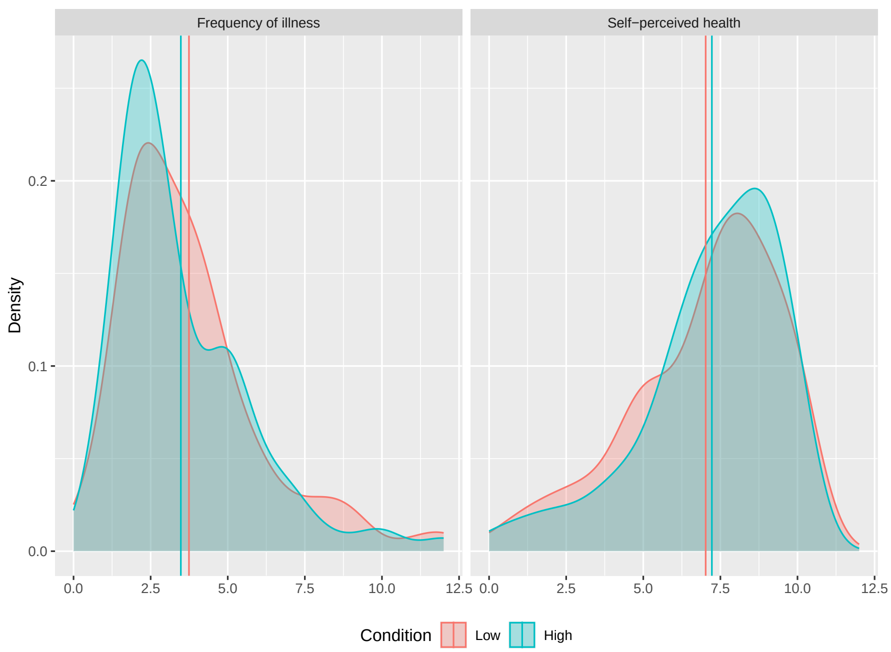

Figure S6. Distribution of values across numeric health-related variables. Colored vertical lines indicate the mean value for each variable under each condition.

2.3.4 Food security

```
ggarrange(
  # Select columns from desc_quest, including 'Escasez alimentaria' (food scarcity)
  desc_quest |>
    select(ID, Condition, "Escasez alimentaria1":"Escasez alimentaria5") |>
    # Pivot the Escasez alimentaria1 to Escasez alimentaria5 columns into a long format
    pivot_longer("Escasez alimentaria1":"Escasez alimentaria5",
      names_to = "Variable",
      values_to = "Value") |>
    # Clean up variable names
    mutate(Variable = str_replace_all(Variable, "Escasez alimentaria", "")) |>
    mutate(Variable = str_replace_all(Variable, "1", "1. Smaller food portions")) |>
    mutate(Variable = str_replace_all(Variable, "2", "2. Reduced number of meals")) |>
    mutate(Variable = str_replace_all(Variable, "3", "3. Food scarcity at home")) |>
    mutate(Variable = str_replace_all(Variable, "4", "4. Sleeping with hunger")) |>
    mutate(Variable = str_replace_all(Variable, "5", "5. Day and night without eating")) |>
    # Create a ggplot object for the first set of data
    ggplot(aes(y = Value, fill = Condition, color = Condition)) +
    # Plot bar charts for each condition within each variable
    geom_bar(alpha = 0.3, position = position_dodge()) +
    # Add text labels on top of the bars showing the proportion of each category
    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) +
    # Divide the plot into facets by Variable
    facet_wrap(~Variable, scales = "free") +
    # Set labels for the y-axis with a maximum width of 20 characters
    scale_y_discrete(labels = label_wrap(20)) +
    # Adjust the text size of the y-axis
    theme(axis.text.y = element_text(size = 8)) +
    labs(x = NULL, y = NULL, title = "Items"),
  # Select columns from desc_quest dataframe, including Food_insecurity column
  desc_quest |>
    select(ID, Condition, Food_insecurity) |>
    # Convert the Food_insecurity column into long format
    pivot_longer(Food_insecurity,
      names_to = "Variable",
      values_to = "Value") |>
    # Convert the Value column to numeric
    mutate(Value = as.numeric(Value)) |>
    # Clean up variable names
    mutate(Variable = str_replace_all(Variable, "_", " ")) |>
    # Create a ggplot object for the second set of data
    ggplot(aes(x = Value, fill = Condition, color = Condition)) +
    # Plot density curves for each condition within each variable
    geom_density(alpha = 0.3) +
    # Divide the plot into facets by Variable
    facet_wrap(~Variable) +
    # Add vertical lines to indicate mean values
    stat_summary(aes(xintercept = after_stat(x), y = 0),
      fun = mean, geom = "vline", orientation = "y") +
    labs(x = NULL, y = NULL, title = "Total"),
```

```r
  # Specify the widths of the two columns and common legend position (bottom)
  widths = c(3, 1),
  common.legend = TRUE,
  legend = "bottom",
  labels = "auto")
```

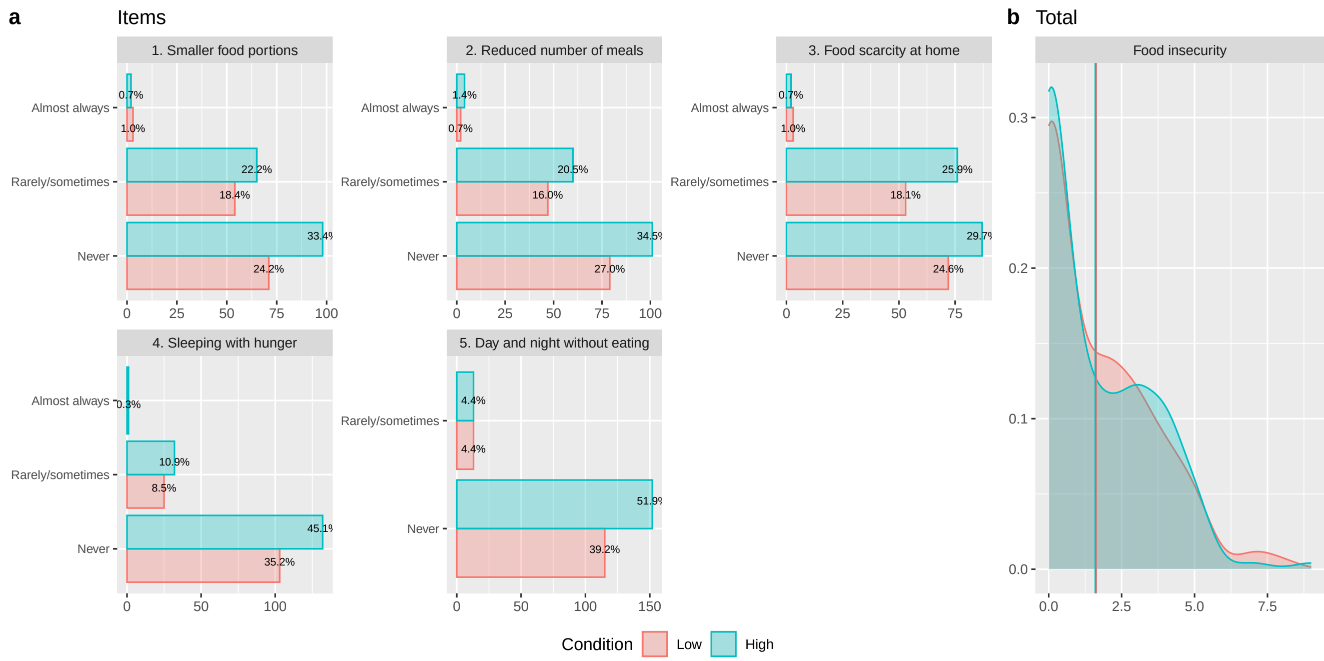

Figure S7. Distribution of values across food security variables, by condition. **a.** Proportional number of participants across ordinal items. **b.** Distribution of values for the toital score. Colored vertical lines indicate the mean value for participants in each condition.

2.3.5 Hormonal variables

```r
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, 2),
  common.legend = TRUE,
  legend = "bottom",
  labels = "auto")
```

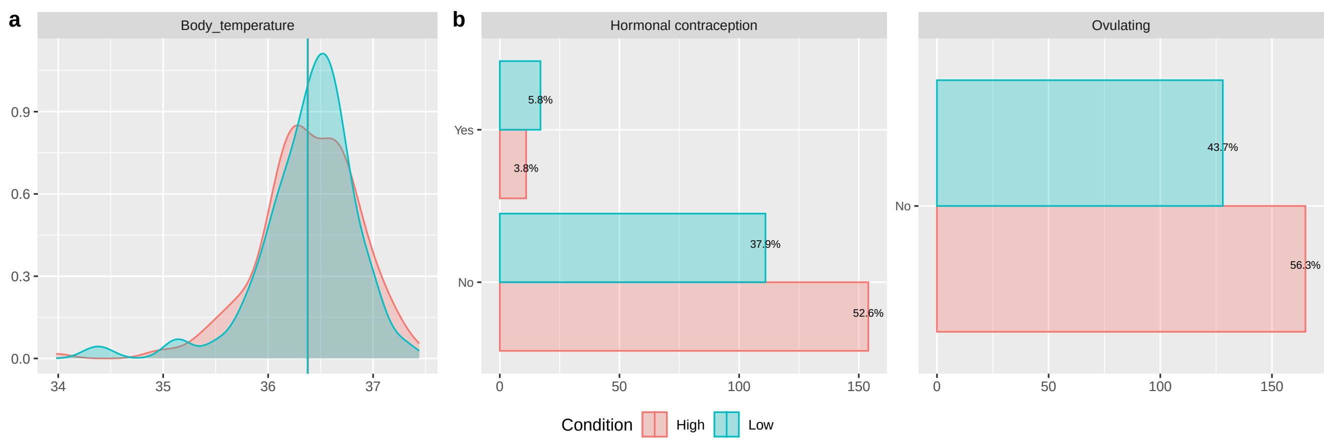

Figure S8. Distribution of values across hormonal variables, by condition. **a.** Distribution of values for body temperature. Colored vertical lines indicate the mean value for participants in each condition. **b.** Proportional number of participants across categorical variables.

2.3.6 Self-perceived conditions

```
desc_quest |>
  select(ID, Condition, starts_with("SP_"), -SP_health) |>
  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) +
  theme(legend.position = "bottom") +
  stat_summary(aes(xintercept = after_stat(x), y = 0),
               fun = mean, geom = "vline", orientation = "y") +
  labs(x = NULL, y = NULL) +
  facet_wrap(~Variable, scales = "free")
```

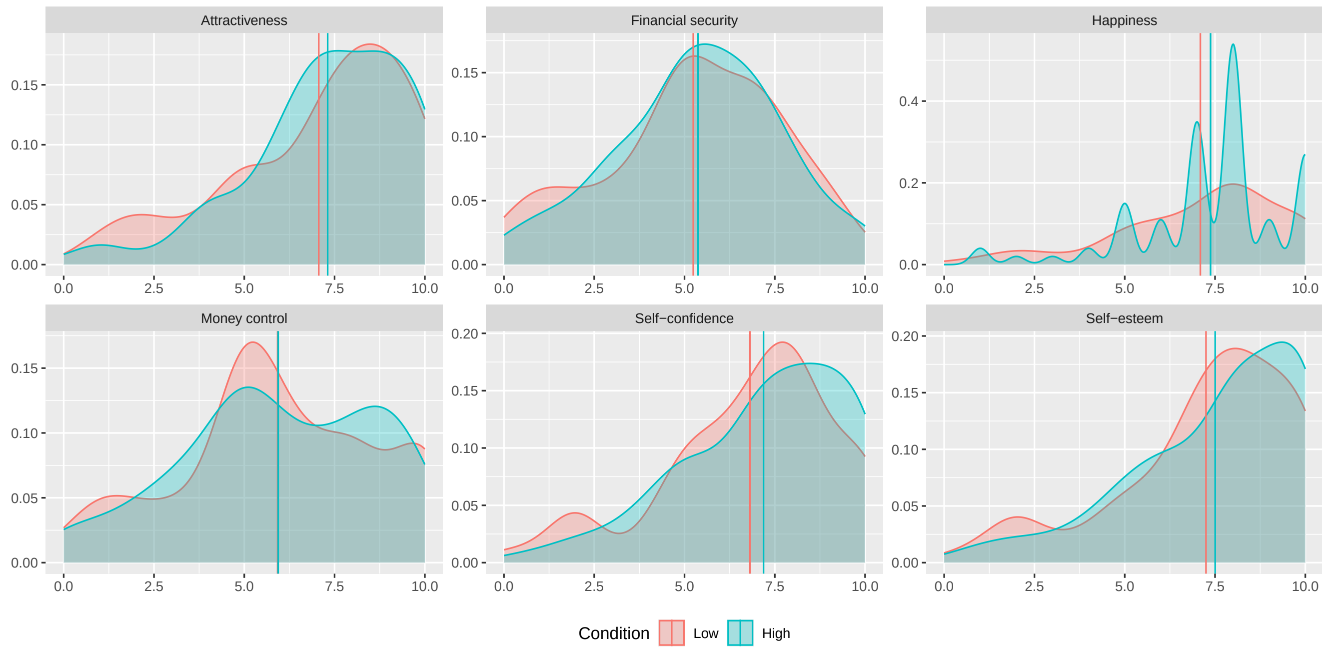

Figure S9. Distribution of values across self-perceived conditions. Colored vertical lines indicate the mean value for participants in each condition.

2.3.7 Current/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) +
  theme(legend.position = "bottom") +
  stat_summary(aes(xintercept = after_stat(x), y = 0),
               fun = mean, geom = "vline", orientation = "y") +
  labs(x = NULL, y = NULL) +
  facet_wrap(~Variable, scales = "free")
```

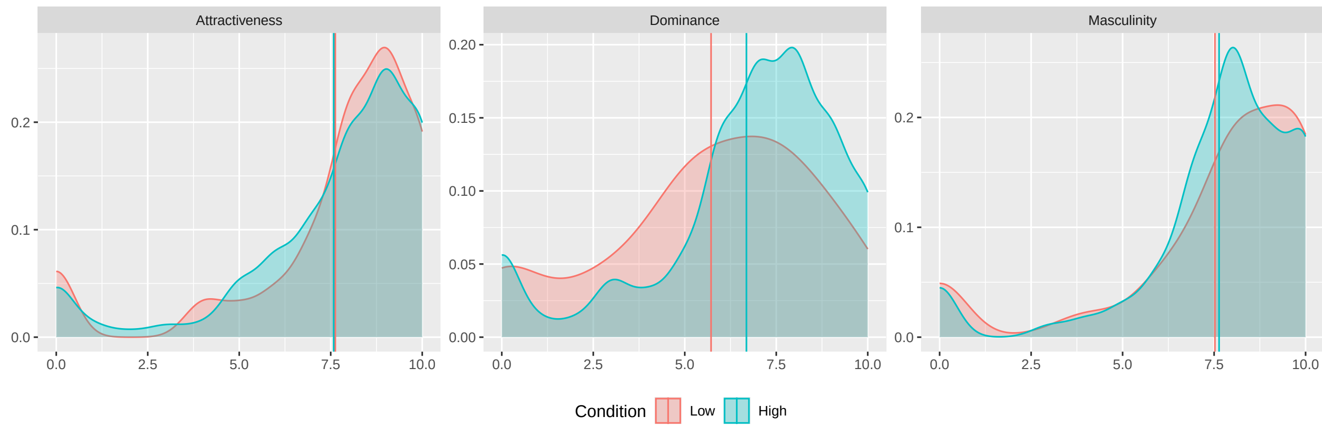

Figure S10. Distribution of values across perceptions of the last partner by condition. Colored vertical lines indicate the mean value for participants in each condition.

2.3.8 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_dangerous) |>
                      pivot_longer(Men_perceived_as_dangerous,
                                   names_to = "Variable",
                                   values_to = "Value") |>
                      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 = "Men perceived as dangerous") +
                      facet_wrap(~Variable, scales = "free") +
                      stat_summary(aes(xintercept = after_stat(x), y = 0),
                                   fun = mean, geom = "vline", orientation = "y") +
                      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")
```

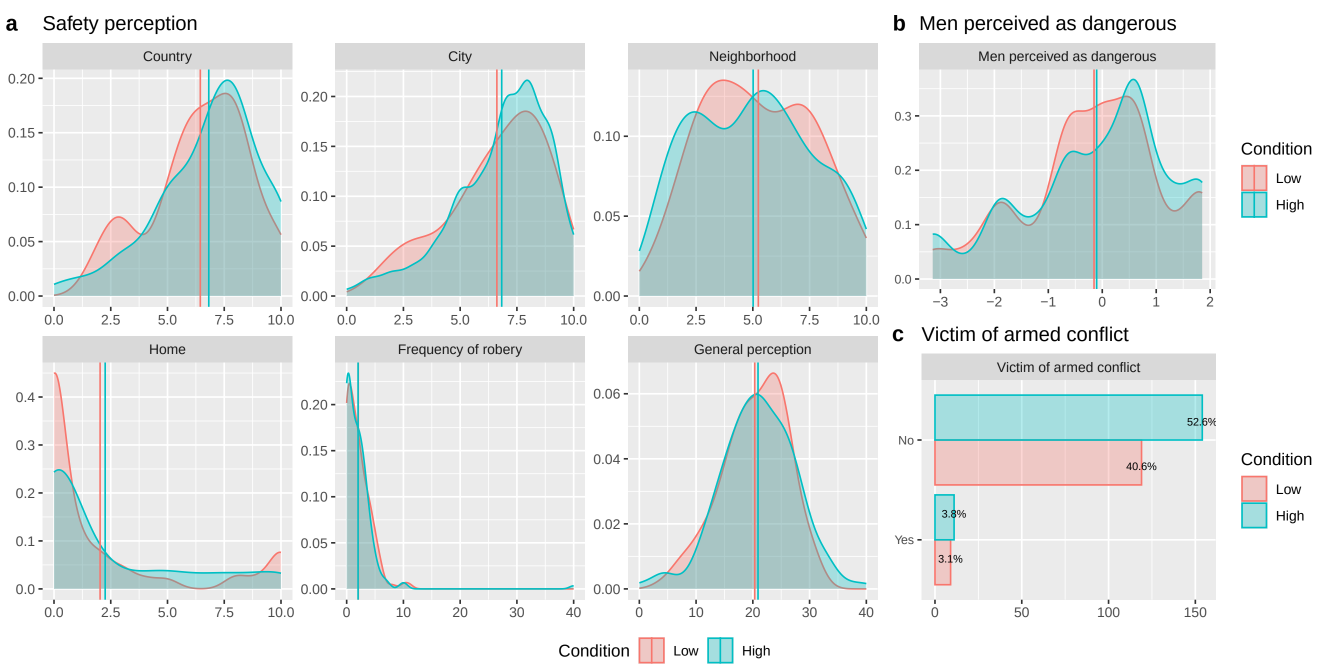

Figure S11. Distribution of values across perceptions of violence, by condition. **a.** Distribution of values across variables related to safety perception. **b.** Perceptions of men as dangerous. **c.** Proportional number of participants who reported being victims of the Colombian armed conflict. For panels a and b, colored vertical lines indicate the mean value for each variable under each condition.

2.3.9 Gender and partner violence

```
ggarrange(desc_quest |>
            select(ID, Condition, Freq_partner_physical_violence,
                   , Freq_partner_sexual_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, 3),
          common.legend = TRUE,
          legend = "bottom",
          labels = "auto")
```

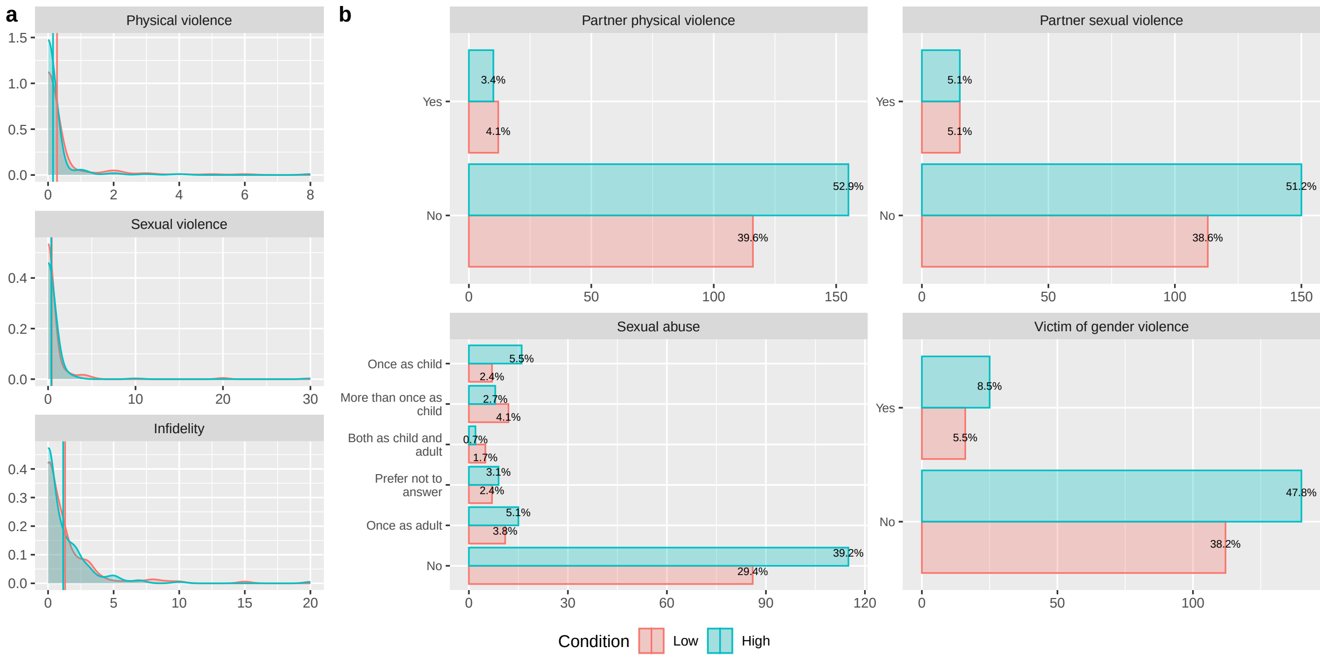

Figure S12. Distribution of values across gender and partner violence suffered by participants, by condition. **a.** Distribution of values across numeric variables. Colored vertical lines indicate the mean value for each variable under each condition. **b.** Proportional number of participants wacross categorical variables.

2.3.10 Subjective evaluation of stimuli

```
cond_labs <- c("Condition: High", "Condition: Low")
names(cond_labs) <- c("High", "Low")

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) +
  theme(legend.position = "bottom") +
  labs(y = "Density", x = "Score", color = "Sexual dimorphism", fill = "Sexual dimorphism") +
  facet_grid(Condition~Variable, scales = "free",
             labeller = labeller(Condition = cond_labs)) +
  scale_color_manual(values = c("#E69F00", "#56B4E9")) +
  scale_fill_manual(values = c("#E69F00", "#56B4E9")) +
  stat_summary(aes(xintercept = after_stat(x), y = 0),
               fun = mean, geom = "vline", orientation = "y")
```

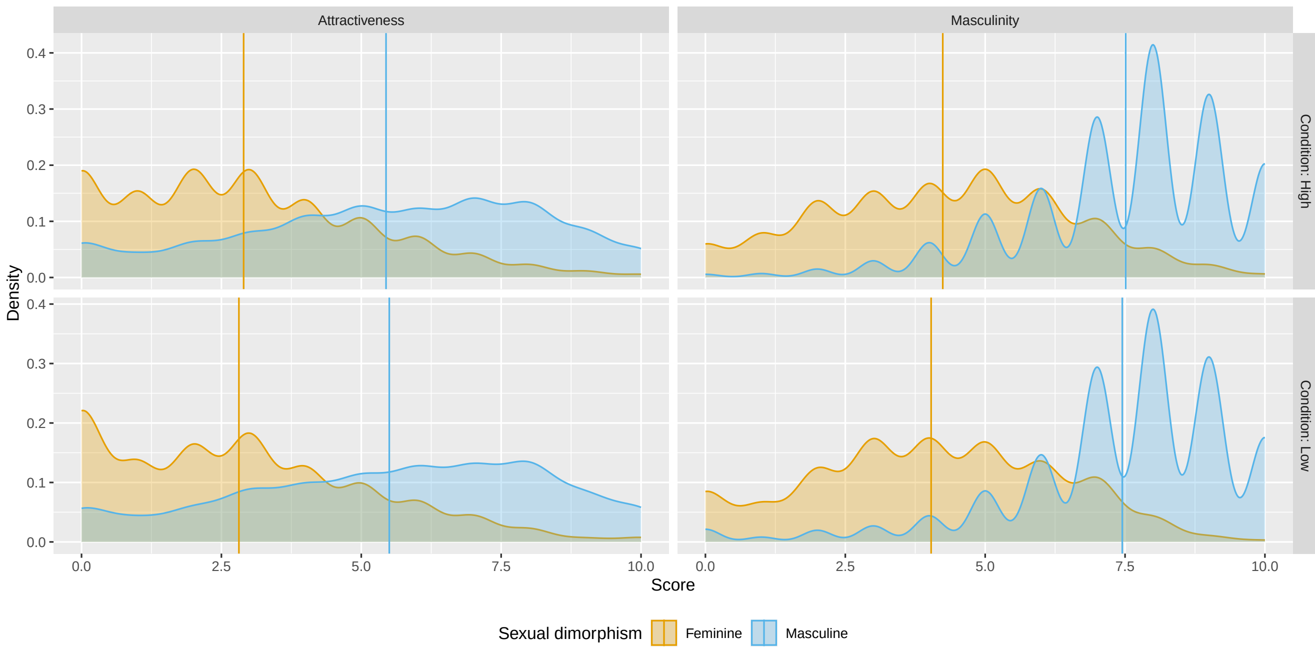

Figure S13. Distribution of values across subjective evaluations of attractiveness and masculinity of the stimuli used in the experiment, split by sexual dimorphism manipulations (feminine, maculine). Panels on the left are for attractiveness scores, and on the right for masculinity scores. Top panels are for participants in the high condition, and on the bottom for the low condition. Colored vertical lines indicate the mean value for participants in each condition.

2.4 Correlations

2.4.1 Correlations between partner perceptions

```
quests_fin |>
  select(
    Freq_partner_physical_violence,
    Freq_partner_sexual_violence,
    Freq_partner_infidelity,
    Partner_masculinity,
    Partner_dominance,
    Partner_attractiveness) |>
  rename(
    "Physical violence" = "Freq_partner_physical_violence",
    "Sexual violence" = "Freq_partner_sexual_violence",
    "Infidelity" = "Freq_partner_infidelity",
    "Masculinity" = "Partner_masculinity",
    "Dominance" = "Partner_dominance",
    "Attractiveness" = "Partner_attractiveness") |>
  corr.stars() |>
  rownames_to_column(var = " ") |>
  dplyr::slice(-1) |>
  kable(digits = 2,
        booktabs = TRUE,
        align = c("l", rep("c", 5)),
        linesep = "",
        caption = "Correlations between partner perceptions",
        escape = FALSE) |>
  kable_styling(latex_options = c("HOLD_position")) |>
```

```
  footnote(general = paste0("Values represent Pearson correlation coefficients ($r$). ",
                            "Physical violence, sexual violence, and infidelity are frequencies. ",
                            "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)
```

Table S5. *Correlations between partner perceptions*

	Physical violence	Sexual violence	Infidelity	Masculinity	Dominance
Sexual violence	**0.18****				
Infidelity	**0.25*****	0.01			
Masculinity	-0.03	0.03	**0.13***		
Dominance	0.01	0.08	0.08	**0.72*****	
Attractiveness	-0.06	0.07	0.06	**0.78*****	**0.6*****

Note: Values represent Pearson correlation coefficients (r). Physical violence, sexual violence, and infidelity are frequencies. For significance, $^{\dagger}p < 0.1$, $^{*}p < 0.05$, $^{**}p < 0.01$, $^{***}p < 0.001$. Significant correlations are in bold.

2.4.2 Correlations between XXXXXX

```
desc_quest |>
  left_join(reg_fin |>
              select(ID, Body_temperature),
            by = c("ID")) |>
  select(Age,
         Freq_illness,
         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(., "Frequency of partner", "Partner")) |>
  rename_with(~str_replace_all(., "Perceived", "")) |>
  rename_with(~str_replace_all(., "asculinity", "asc.")) |>
  rename_with(~str_replace_all(., "ttractiveness", "ttr.")) |>
  rename_with(~str_replace_all(., "ominance", "om.")) |>
  rename_with(~str_replace_all(., " neighborhood", "Neighbor.")) |>
  rename_with(~str_replace_all(., "Partner ", "")) |>
  rename_with(~str_to_sentence(.)) |>
  rename_with(~str_replace_all(., "Sp", "S.P.")) |>
  rename_with(~str_trim(.)) |>
  corr.stars() |>
  rownames_to_column(var = " ") |>
  dplyr::slice(-1) |>
  kable(digits = 2,
        booktabs = TRUE,
        align = c("l", rep("c", 20)),
        linesep = "",
        caption = "Correlations between XXXXXX",
```

```
      escape = FALSE) |>
  kable_styling(latex_options = c("HOLD_position"),
              font_size = 3.9) |>
  column_spec(1, width = "1cm") |>
  column_spec(2:21, width = "0.76cm") |>
  add_header_above(c(" ",
                   "Age" = 1,
                   "Health" = 1,
                   "Self-perceived conditions" = 7,
                   "Current/last partner\nperception" = 3,
                   "Perceived context\nviolence" = 6,
                   "Frequency of\npartner violence" = 2),
                 bold = TRUE) |>
  footnote(general = paste0("Values represent Pearson correlation coefficients ($r$). ",
                           "S.P. = self-perceived; masc. = masculinity;
                           dom. = dominance; attr. = attractiveness;
                           neighbor. = neighborhood. ",
                           "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()
```

Table S6. *Correlations between XXXXXX*

	Age	**Health**	**Self-perceived conditions**							**Current/last partner perception**			**Perceived context violence**						**Frequency of partner violence**	
	Age	Frequency of illness	S.P. happiness	S.P. financial security	S.P. money control	S.P. attr.	S.P. self confidence	S.P. self esteem	S.P. health	Masc.	Dom.	Attr.	Country safety	City safety	Neighbor. safety	Home safety	Safety	Frequency of robery	Physical violence	Sexual violence
Frequency of illness	-0.03																			
S.P. happiness	-0.05	**-0.2*** **																		
S.P. financial security	-0.1†	-0.06	**0.59*** **																	
S.P. money control	0.03	**-0.18** **	**0.48*** **	**0.62*** **																
S.P. attr.	-0.06	**-0.16** **	**0.68*** **	**0.46*** **	**0.51*** **															
S.P. self confidence	-0.07	**-0.25*** **	**0.73*** **	**0.48*** **	**0.51*** **	**0.87*** **														
S.P. self esteem	-0.06	**-0.25*** **	**0.75*** **	**0.49*** **	**0.53*** **	**0.84*** **	**0.93*** **													
S.P. health	-0.02	**-0.26*** **	**0.69*** **	**0.45*** **	**0.45*** **	**0.68*** **	**0.72*** **	**0.73*** **												
Masc.	**0.14* **	-0.1†	**0.17** **	**0.18** **	**0.18** **	**0.21*** **	**0.22*** **	**0.25*** **	**0.2*** **											
Dom.	0.05	-0.08	**0.13* **	**0.17** **	**0.14* **	**0.17** **	**0.15** **	**0.19** **	**0.12* **	**0.72*** **										
Attr.	**0.13* **	-0.05	**0.17** **	**0.18** **	**0.19** **	**0.18** **	**0.19** **	**0.23*** **	**0.18** **	**0.78*** **	**0.6*** **									
Country safety	0.02	-0.02	**0.19** **	0.01	0.06	**0.22*** **	**0.21*** **	**0.21*** **	**0.17** **	-0.04	0.04	-0.07								
City safety	0.02	-0.01	**0.17** **	0.02	0.04	**0.21*** **	**0.19** **	**0.19*** **	**0.17** **	-0.06	0.03	-0.08	**0.82*** **							
Neighbor. safety	0.11†	-0.04	**0.12* **	-0.08	0.00	**0.12* **	0.09	0.09	0.06	0.03	0.02	-0.03	**0.32*** **	**0.32*** **						
Home safety	0.01	-0.07	-0.03	0.01	-0.03	-0.01	0.00	-0.03	-0.03	0.03	0.01	-0.04	**-0.24*** **	**-0.31*** **	**0.32*** **					
Safety	0.06	-0.06	**0.16** **	-0.02	0.02	**0.19** **	**0.18** **	**0.17** **	**0.13* **	0.00	0.04	-0.08	**0.64*** **	**0.61*** **	**0.8*** **	**0.46*** **				
Frequency of robery	-0.11†	0.10	-0.03	0.01	-0.05	-0.09	-0.09	-0.11†	-0.09	-0.02	-0.02	0.00	0.04	0.05	0.11†	0.09	**0.12* **			
Physical violence	**0.19** **	0.06	-0.03	0.00	-0.04	-0.01	-0.08	-0.08	-0.03	-0.03	0.01	-0.06	0.07	0.04	0.05	0.01	0.06	0.00		
Sexual violence	0.02	-0.05	0.09	0.08	0.02	0.08	0.03	0.04	0.07	0.03	0.08	0.07	0.04	0.09	-0.03	-0.08	-0.01	0.06	**0.18** **	
Infidelity	**0.2*** **	0.03	-0.03	-0.07	-0.05	0.06	0.04	-0.02	-0.05	**0.13* **	0.08	0.06	0.09	0.08	0.09	-0.02	0.09	-0.01	**0.25*** **	0.01

Note: Values represent Pearson correlation coefficients (r). S.P. = self-perceived; masc. = masculinity; dom. = dominance; attr. = attractiveness; neighbor. = neighborhood. For significance, $^{\dagger}p < 0.1$, $^{*}p < 0.05$, $^{**}p < 0.01$, $^{***}p < 0.001$. Significant correlations are in bold.

2.4.3 Correlations between fixations, subjective evaluations of stimuli, partner perceptions, and violence

```
dat_main_corr <- dat |>
  select(ID, Condition, Relationship,
         TFD, DFF, NF,
         Masculinity, Attractiveness,
         Partner_attractiveness:Partner_masculinity,
         ends_with("_safety"), Freq_robery,
         starts_with("Freq_partner_")) |>
  group_by(ID, Condition, Relationship) |>
  summarise_all(mean)

dat_main_corr_high <- dat_main_corr |>
  filter(Condition == "High") |>
  ungroup() |>
  select(TFD:Freq_partner_infidelity) |>
  rename_with(~str_replace_all(., "_", " ")) |>
  rename_with(~str_replace_all(., "Freq", "Frequency of")) |>
  rename_with(~str_replace_all(., "Frequency of partner", "Partner")) |>
  rename_with(~str_replace_all(., "Perceived", "")) |>
  rename_with(~str_replace_all(., "asculinity", "asc.")) |>
  rename_with(~str_replace_all(., "ttractiveness", "ttr.")) |>
  rename_with(~str_replace_all(., "ominance", "om.")) |>
  rename_with(~str_replace_all(., " neighborhood", "Neighbor.")) |>
  rename_with(~str_to_sentence(.)) |>
    rename("TFD" = "Tfd",
         "DFF" = "Dff",
         "NF" = "Nf") |>
  rename_with(~str_trim(.)) |>
  corr.stars() |>
  rownames_to_column(var = " ") |>
  dplyr::slice(-1)

dat_main_corr_low <- dat_main_corr |>
  filter(Condition == "High") |>
  ungroup() |>
  select(TFD:Freq_partner_infidelity) |>
  rename_with(~str_replace_all(., "_", " ")) |>
  rename_with(~str_replace_all(., "Freq", "Frequency of")) |>
  rename_with(~str_replace_all(., "Frequency of partner", "Partner")) |>
  rename_with(~str_replace_all(., "Perceived", "")) |>
  rename_with(~str_replace_all(., "asculinity", "asc.")) |>
  rename_with(~str_replace_all(., "ttractiveness", "ttr.")) |>
  rename_with(~str_replace_all(., "ominance", "om.")) |>
  rename_with(~str_replace_all(., " neighborhood", "Neighbor.")) |>
  rename_with(~str_to_sentence(.)) |>
    rename("TFD" = "Tfd",
         "DFF" = "Dff",
         "NF" = "Nf") |>
  rename_with(~str_trim(.)) |>
  corr.stars() |>
  rownames_to_column(var = " ") |>
  dplyr::slice(-1)

dat_main_corr_high |>
```

```
bind_rows(dat_main_corr_low) |>
kable(digits = 2,
      booktabs = TRUE,
      align = c("l", rep("c", 20)),
      linesep = "",
      caption = "Correlations between fixations, subjective evaluations of stimuli,
      partner perceptions, and violence by Condition",
      escape = FALSE) |>
kable_styling(latex_options = c("HOLD_position"),
              font_size = 4.2) |>
column_spec(1, width = "2.5cm") |>
column_spec(2:21, width = "0.84cm") |>
add_header_above(c(" ",
                   "Fixations" = 3,
                   "Stimulus ratings" = 2,
                   "Current/last partner\nperception" = 3,
                   "Perceived context\nviolence" = 7,
                   "Frequency of\npartner violence" = 2),
                 bold = TRUE) |>
pack_rows("Condition: High", 1, 17,
          hline_after = TRUE) |>
pack_rows("Condition: Low", 18, 34,
          hline_after = TRUE, hline_before = TRUE) |>
footnote(general = paste0("Values represent Pearson correlation coefficients ($r$). ",
                          "TDF = Total Fixation Duration; DFF = Duration of First Fixation;
                          NF = Number of Fixations; masc. = masculinity;
                          dom. = dominance; attr. = attractiveness;
                          neighbor. = neighborhood. ",
                          "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()
```

Table S7. *Correlations between fixations, subjective evaluations of stimuli, partner perceptions, and violence by Condition*

	Fixations			Stimulus ratings		Current/last partner perception			Perceived context violence							Frequency of partner violence	
	TFD	DFF	NF	Masc.	Attr.	Partner attr.	Partner dom.	Partner masc.	Country safety	City safety	Neighbor. safety	Home safety	Safety	Condition physical safety	Frequency of robery	Partner physical violence	Partner sexual violence
Condition: High																	
DFF	-0.03																
NF	**0.82*** **	**-0.62*** **															
Masc.	**0.13***	0.07	0.06														
Attr.	0.02	**-0.13***	0.08	**0.49*** **													
Partner attr.	-0.04	0.05	-0.05	0.00	-0.01												
Partner dom.	-0.07	-0.03	-0.05	-0.04	-0.01	**0.63*** **											
Partner masc.	-0.07	0.08	-0.11†	-0.01	-0.03	**0.75*** **	**0.71*** **										
Country safety	-0.05	-0.05	-0.08	**0.14***	0.05	-0.06	-0.03	-0.05									
City safety	-0.03	-0.08	-0.03	**0.12***	0.00	-0.06	0.02	-0.02	**0.82*** **								
Neighbor. safety	-0.1†	0.00	-0.1†	**0.18** **	**0.24*** **	0.01	0.00	0.05	**0.38*** **	**0.34*** **							
Home safety	-0.09	0.08	-0.07	0.04	**0.12***	**-0.11***	**-0.12***	-0.05	**-0.16** **	**-0.21*** **	**0.34*** **						
Safety	**-0.11***	-0.01	**-0.11***	**0.18** **	**0.17** **	-0.09†	-0.06	-0.03	**0.68*** **	**0.63*** **	**0.8*** **	**0.51*** **					
Condition physical safety	0.01	0.05	0.00	0.08	0.00	0.09†	0.07	0.1†	-0.03	**-0.11***	0.02	-0.11†	-0.09				
Frequency of robery	-0.01	0.08	-0.04	0.05	**0.13***	-0.04	-0.08	-0.03	0.08	0.06	**0.18** **	**0.15** **	**0.19*** **	-0.09			
Partner physical violence	0.09†	-0.12†	0.08	0.08	0.00	0.00	0.06	0.01	**0.13***	**0.14** **	**0.17** **	0.08	**0.2*** **	-0.02	-0.03		
Partner sexual violence	**0.12***	-0.07	**0.15** **	-0.04	0.01	0.07	0.1†	0.05	0.02	0.1†	-0.01	-0.07	0.00	0.05	-0.02	0.09†	
Partner infidelity	-0.02	0.07	-0.02	-0.05	0.04	0.08	0.06	0.08	**0.12***	0.07	**0.18** **	0.02	**0.14** **	-0.01	0.01	**0.13***	-0.03
Condition: Low																	
DFF	-0.03																
NF	**0.82*** **	**-0.62*** **															
Masc.	**0.13***	0.07	0.06														
Attr.	0.02	**-0.13***	0.08	**0.49*** **													
Partner attr.	-0.04	0.05	-0.05	0.00	-0.01												
Partner dom.	-0.07	-0.03	-0.05	-0.04	-0.01	**0.63*** **											
Partner masc.	-0.07	0.08	-0.11†	-0.01	-0.03	**0.75*** **	**0.71*** **										
Country safety	-0.05	-0.05	-0.08	**0.14***	0.05	-0.06	-0.03	-0.05									
City safety	-0.03	-0.08	-0.03	**0.12***	0.00	-0.06	0.02	-0.02	**0.82*** **								
Neighbor. safety	-0.1†	0.00	-0.1†	**0.18** **	**0.24*** **	0.01	0.00	0.05	**0.38*** **	**0.34*** **							
Home safety	-0.09	0.08	-0.07	0.04	**0.12***	**-0.11***	**-0.12***	-0.05	**-0.16** **	**-0.21*** **	**0.34*** **						
Safety	**-0.11***	-0.01	**-0.11***	**0.18** **	**0.17** **	-0.09†	-0.06	-0.03	**0.68*** **	**0.63*** **	**0.8*** **	**0.51*** **					
Condition physical safety	0.01	0.05	0.00	0.08	0.00	0.09†	0.07	0.1†	-0.03	**-0.11***	0.02	-0.11†	-0.09				
Frequency of robery	-0.01	0.08	-0.04	0.05	**0.13***	-0.04	-0.08	-0.03	0.08	0.06	**0.18** **	**0.15** **	**0.19*** **	-0.09			
Partner physical violence	0.09†	-0.12†	0.08	0.08	0.00	0.00	0.06	0.01	**0.13***	**0.14** **	**0.17** **	0.08	**0.2*** **	-0.02	-0.03		
Partner sexual violence	**0.12***	-0.07	**0.15** **	-0.04	0.01	0.07	0.1†	0.05	0.02	0.1†	-0.01	-0.07	0.00	0.05	-0.02	0.09†	
Partner infidelity	-0.02	0.07	-0.02	-0.05	0.04	0.08	0.06	0.08	**0.12***	0.07	**0.18** **	0.02	**0.14** **	-0.01	0.01	**0.13***	-0.03

Note: Values represent Pearson correlation coefficients (r). TDF = Total Fixation Duration; DFF = Duration of First Fixation; NF = Number of Fixations; masc. = masculinity; dom. = dominance; attr. = attractiveness; neighbor. = neighborhood. For significance, $^{\dagger}p < 0.1$, $^{*}p < 0.05$, $^{**}p < 0.01$, $^{***}p < 0.001$. Significant correlations are in bold.

2.4.4 Correlations between partner violence and mean difference scores between responses to masculinized and feminized stimuli

```
dat_choice_dif <- dat |>
  mutate(Choice = as.numeric(recode(Choice,
                                    "Yes" =  "1",
                                    "No" = "0"))) |>
  group_by(ID, Sexual_dimorphism, Relationship, Condition) |>
  summarise(Choice = sum(Choice)) |>
  group_by(ID, Sexual_dimorphism, Relationship, Condition) |>
  summarise(Choice_count = sum(Choice)) |>
  ungroup() |>
  group_by(ID, Relationship, Condition) |>
  summarise(Choice_dif = Choice_count[Sexual_dimorphism == "Masculinized"] -
              Choice_count[Sexual_dimorphism == "Feminized"])

dat_dif_short <- dat_dif |>
  group_by(ID, Relationship, Condition) |>
  summarise(Freq_partner_physical_violence = mean(Freq_partner_physical_violence),
            Freq_partner_sexual_violence = mean(Freq_partner_sexual_violence),
            Freq_partner_infidelity = mean(Freq_partner_infidelity),
            Men_perceived_as_dangerous = mean(Men_perceived_as_dangerous),
            DFF_dif = mean(DFF_dif),
            TFD_dif = mean(TFD_dif),
            NF_dif = mean(NF_dif),
            Attr_dif = mean(Attr_dif),
            Masc_dif = mean(Masc_dif)) |>
  left_join(dat_choice_dif |>
              select(ID, Relationship, Condition, Choice_dif),
            by = c("ID", "Relationship", "Condition")) |>
  rename("PPV" = "Freq_partner_physical_violence",
         "PSV" = "Freq_partner_sexual_violence",
         "PI" =  "Freq_partner_infidelity",
         "MPD" = "Men_perceived_as_dangerous",
         "DFF" = "DFF_dif",
         "TFD" = "TFD_dif",
         "NF" =  "NF_dif",
         "Attr." = "Attr_dif",
         "Masc." = "Masc_dif",
         "Choice" = "Choice_dif") |>
  ungroup()

dat_dif_short |>
  filter(Relationship == "Short term" & Condition == "Low") |>
  select(where(is.numeric)) |>
  corr.stars() |>
  rownames_to_column(var = " ") |>
  dplyr::slice(-1) |>
  bind_rows(dat_dif_short |>
              filter(Relationship == "Long term" & Condition == "Low") |>
              select(where(is.numeric)) |>
              corr.stars() |>
              rownames_to_column(var = " ") |>
              dplyr::slice(-1)) |>
  bind_rows(dat_dif_short |>
              filter(Relationship == "Short term" & Condition == "High") |>
```

```
            select(where(is.numeric)) |>
            corr.stars() |>
            rownames_to_column(var = " ") |>
            dplyr::slice(-1)) |>
bind_rows(dat_dif_short |>
            filter(Relationship == "Long term" & Condition == "High") |>
            select(where(is.numeric)) |>
            corr.stars() |>
            rownames_to_column(var = " ") |>
            dplyr::slice(-1)) |>
kable(digits = 2,
      booktabs = TRUE,
      align = c("l", rep("c", 10)),
      linesep = "",
      caption = "Correlations between partner violence and mean difference scores between
      responses to masculinized and feminized stimuli",
      escape = FALSE) |>
kable_styling(latex_options = c("HOLD_position", "scale_down")) |>
add_header_above(c(" ",
                   " " = 4,
                   "Difference scores\n(masculinized - feminized)" = 5),
                 bold = TRUE) |>
pack_rows("Low condition, short-term relationship", 1, 9,
          hline_after = TRUE) |>
pack_rows("Low condition, long-term relationship", 10, 18,
          hline_after = TRUE, hline_before = TRUE) |>
pack_rows("High condition, short-term relationship", 19, 27,
          hline_after = TRUE, hline_before = TRUE) |>
pack_rows("High condition, long-term relationship", 28, 36,
          hline_after = TRUE, hline_before = TRUE) |>
footnote(general = paste0("Values represent Pearson correlation coefficients ($r$). ",
                          "PPV = Frequency of partner physical violence;
                          PSV = Frequency of partner sexual violence;
                          PI =  Frequency of partner infidelity;
                          MPD = Men perceived as dangerous;
                          DFF = Duration of First Fixation;
                          TDF = Total Fixation Duration;
                          NF = Number of Fixations;
                          attr. = attractiveness;
                          masc. = masculinity. ",
                          "For variables that were evaluated in response to each stimulus
                          (DFF, TFD, NF, Attr., Masc. and Choice), correlations are
                          with the difference between responses to masculinized minus
                          feminized stimuli, so that higher (and possitive values) indicate
                          a stronger preference for masculinized stimuli. ",
                          "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)
```

Table S8. *Correlations between partner violence and mean difference scores between responses to masculinized and feminized stimuli*

					Difference scores (masculinized - feminized)				
	PPV	PSV	PI	MPD	DFF	TFD	NF	Attr.	Masc.
Low condition, short-term relationship									
PSV	**0.31*****								
PI	**0.38*****	0.07							
MPD	0.02	**0.22***	-0.08						
DFF	-0.01	-0.04	0.00	0.03					
TFD	0.05	-0.07	0.11	-0.12	-0.05				
NF	0.09	-0.06	0.10	-0.13	-0.13	**0.96*****			
Attr.	0.02	-0.02	0.07	$-0.17^{\dagger}$	-0.17	**0.21***	**0.23***		
Masc.	-0.05	0.03	0.09	0.03	-0.06	0.13	0.13	**0.57*****	
Choice	$0.15^{\dagger}$	0.01	0.11	-0.03	-0.06	**0.74*****	**0.73*****	**0.26****	$0.15^{\dagger}$
Low condition, long-term relationship									
PSV	**0.31*****								
PI	**0.38*****	0.07							
MPD	0.02	**0.22***	-0.08						
DFF	0.01	0.08	0.09	$0.19^{\dagger}$					
TFD	0.08	-0.13	0.00	-0.13	-0.03				
NF	0.11	-0.06	0.01	**-0.19***	-0.13	**0.95*****			
Attr.	0.02	-0.02	0.07	$-0.17^{\dagger}$	0.00	**0.24****	**0.29****		
Masc.	-0.05	0.03	0.09	0.03	-0.03	-0.01	0.05	**0.57*****	
Choice	0.00	-0.03	-0.11	-0.03	-0.01	**0.72*****	**0.67*****	**0.32*****	0.06
High condition, short-term relationship									
PSV	0.09								
PI	0.13	-0.03							
MPD	0.12	0.09	**0.15***						
DFF	0.01	-0.04	-0.08	-0.08					
TFD	$-0.13^{\dagger}$	-0.07	0.04	-0.10	0.10				
NF	-0.10	-0.06	0.05	-0.10	-0.03	**0.96*****			
Attr.	0.00	0.04	$0.13^{\dagger}$	-0.01	-0.14	**0.26*****	**0.25****		
Masc.	-0.08	0.11	0.08	0.01	-0.01	**0.16***	$0.14^{\dagger}$	**0.54*****	
Choice	-0.10	-0.01	0.03	-0.07	0.14	**0.74*****	**0.71*****	**0.26*****	**0.18***
High condition, long-term relationship									
PSV	0.09								
PI	0.13	-0.03							
MPD	0.12	0.09	**0.15***						
DFF	-0.03	-0.05	0.10	-0.05					
TFD	**-0.25****	-0.08	-0.02	$-0.14^{\dagger}$	0.15				
NF	**-0.19***	-0.07	-0.01	-0.12	0.04	**0.95*****			
Attr.	0.00	0.04	$0.13^{\dagger}$	-0.01	$0.17^{\dagger}$	**0.33*****	**0.29*****		
Masc.	-0.08	0.11	0.08	0.01	0.13	0.09	0.05	**0.54*****	
Choice	**-0.22****	-0.01	0.02	$-0.15^{\dagger}$	**0.25****	**0.7*****	**0.64*****	**0.49*****	**0.23****

Note: Values represent Pearson correlation coefficients (r). PPV = Frequency of partner physical violence; PSV = Frequency of partner sexual violence; PI = Frequency of partner infidelity; MPD = Men perceived as dangerous; DFF = Duration of First Fixation; TDF = Total Fixation Duration; NF = Number of Fixations; attr. = attractiveness; masc. = masculinity. For variables that were evaluated in response to each stimulus (DFF, TFD, NF, Attr., Masc. and Choice), correlations are with the difference between responses to masculinized minus feminized stimuli, so that higher (and possitive values) indicate a stronger preference for masculinized stimuli. For significance, $^{\dagger}p < 0.1$, $^{*}p < 0.05$, $^{**}p < 0.01$, $^{***}p < 0.001$. Significant correlations are in bold.

3 Manipulation check

3.1 Resource availability dimensions by condition

```
reg_fin |>
  select(starts_with("Condition")) |>
  pivot_longer(cols = contains("_"),
               names_to = "Dimension",
               values_to = "Score") |>
  group_by(Dimension) |>
  summarise("Mean (Low)" = mean(Score[reg_fin$Condition == "Low"]),
            "Mean (High)" = mean(Score[reg_fin$Condition == "High"]),
            "\\textit{t}" = t.test(Score ~ Condition)$statistic,
            "\\textit{p}" = t.test(Score ~ Condition)$p.value,
            "\\textit{g}" = hedges_g(Score ~ Condition)$Hedges_g) |>
  ungroup() |>
  mutate(Dimension = str_replace_all(Dimension, "_", " "),
         Dimension = str_remove_all(Dimension, "Condition "),
         Dimension = str_to_title(Dimension)) |>
  mutate("\\textit{p}" = pval.lev("\\textit{p}")) |>
  kable(digits = 2,
        booktabs = TRUE,
        align = c("l", rep("c", 5)),
        linesep = "",
        caption = "Mean scores and comparison of resource availability dimensions by condition",
        escape = FALSE) |>
  kable_styling(latex_options = c("HOLD_position", "scale_down")) |>
  add_header_above(c(" ",
                     "Condition" = 2,
                     " " = 3),
                   bold = TRUE) |>
  footnote(general = "Results are from Welch's \\\\textit{t}-test.
           As effect size, Hedges' \\\\textit{g} values are reported.",
           threeparttable = TRUE,
           footnote_as_chunk = TRUE,
           escape = FALSE)
```

Table S9. *Mean scores and comparison of resource availability dimensions by condition*

	Condition				
Dimension	Mean (Low)	Mean (High)	*t*	*p*	*g*
Economic Security	0.76	6.62	54.04	$<$ **0.0001**	6.56
Happiness	1.44	6.37	39.49	$<$ **0.0001**	4.84
Healthy	2.04	6.42	30.39	$<$ **0.0001**	3.81
Physical Safety	1.90	6.27	27.36	$<$ **0.0001**	3.42

Note: Results are from Welch's *t*-test. As effect size, Hedges' *g* values are reported.

3.2 Effect of sexual dimorphisim manipulation on masculinity and attractiveness ratings, by condition

```
# Clean data fro models
eval_desc <- dat |>
  group_by(ID, Sexual_dimorphism, Condition) |>
  summarise(Masculinity = mean(Masculinity),
```

```
            Attractiveness = mean(Attractiveness))

# Masculinity
mod_masc <- lmer(Masculinity ~ Sexual_dimorphism * Condition + (1 | ID), data = eval_desc)
# anova(mod_masc)
contr_mod_masc <- as.data.frame(pairs(emmeans(mod_masc,
                                              ~ Sexual_dimorphism | Condition))) |>
  separate(contrast, c("group1", "group2"), " - ") |>
  mutate(p.signif = stars.pval(p.value))

p_mancheck_masc <- ggplot(eval_desc, aes(x = Sexual_dimorphism, y = Masculinity, color = Sexual_dimorphism
  geom_jitter(alpha = 0.5) +
  stat_summary(fun.data = "mean_cl_boot",
             color = "black",
             size = 0.3) +
  stat_summary(fun.y = mean,
             colour = "black",
             geom = "line",
             aes(group = 1)) +
  stat_pvalue_manual(contr_mod_masc, label = "p.signif",
                   y.position = 10.5,
                   hide.ns = TRUE,
                   tip.length = 0) +
  labs(x = NULL,
       color = "Sexual dimorphism") +
  facet_wrap(~Condition,
             labeller = labeller(Condition = cond_labs))

# Attractiveness
mod_attr <- lmer(Attractiveness ~ Sexual_dimorphism * Condition + (1 | ID), data = eval_desc)
# anova(mod_attr)
contr_mod_attr <- as.data.frame(pairs(emmeans(mod_attr,
                                              ~ Sexual_dimorphism | Condition))) |>
  separate(contrast, c("group1", "group2"), " - ") |>
  mutate(p.signif = stars.pval(p.value))

p_mancheck_attr <- ggplot(eval_desc, aes(x = Sexual_dimorphism, y = Attractiveness, color = Sexual_dimorph
  geom_jitter(alpha = 0.5) +
  stat_summary(fun.data = "mean_cl_boot",
             color = "black",
             size = 0.3) +
  stat_summary(fun.y = mean, colour = "black", geom = "line", aes(group = 1)) +
  stat_pvalue_manual(contr_mod_attr, label = "p.signif",
                   y.position = 10,
                   hide.ns = TRUE,
                   tip.length = 0) +
  labs(x = NULL,
       color = "Sexual dimorphism") +
  facet_wrap(~Condition,
             labeller = labeller(Condition = cond_labs))

# Combined plot
ggarrange(p_mancheck_masc, p_mancheck_attr,
          legend = "none",
          labels = "auto")  |>
  annotate_figure(bottom = text_grob("Sexual dimorphism",
```

```
                         size = 11))
```

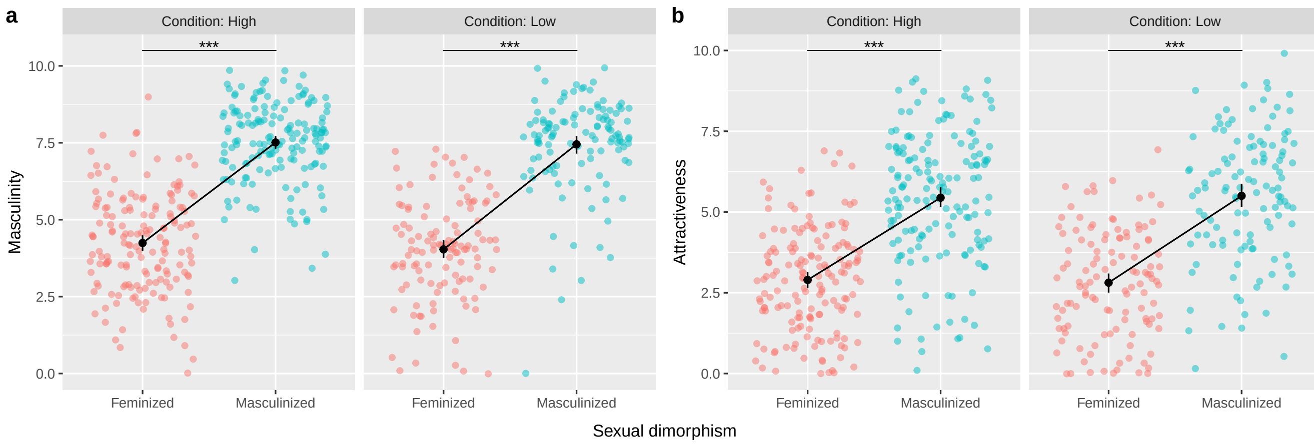

Figure S14. Effect of sexual dimorphisim manipulation on ratings of **(a)** masculinity and **(b)** attractiveness, by condition (High, Low). Reported significance are contrasts between sexual dimorphisim levels (feminized, masculinized) from linear mixed models including the fixed effects of condition, sexual dimorphism, and their interaction, as well as random intercepts per participants. In both models the main (within-subject) effect of the sexual dimorphism manipulation was significant, but not the main effect of condition or its interaction with sexual dimorphism. Mean ratings and 95% CIs are in black. ***$p < 0.001$.

4 Models of the experimental design

4.1 Model 1: DFF

4.1.1 Data

```
dat_m1 <- dat |>
  select(DFF, Condition, Relationship, Sexual_dimorphism,
         ID, Stimulus,
         Freq_partner_physical_violence, Freq_partner_sexual_violence,
         Freq_partner_infidelity, Men_perceived_as_dangerous,
         Perceived_home_safety) |>
  filter(DFF >= 100 & DFF <= 1000) |>
  drop_na()
```

4.1.2 Fit linear mixed model

```
mod1 <- lmer(DFF ~ Condition * Relationship * Sexual_dimorphism +
               (1 | ID) + (1 | Stimulus),
             data = dat_m1,
             na.action = "na.fail")
```

```
lmer.anova.tab(model = mod1)
```

Table S10. *ANOVA-type table of fixed effects for the DFF model*

FIxed effect	F	df	p
Condition	0.06	1, 290.03	0.8
Relationship	0.08	1, 33648.27	0.77
Sexual dimorphism	11.80	1, 33640.71	$<$ **0.001**
Condition × Relationship	0.14	1, 33648.5	0.71
Condition × Sexual dimorphism	0.01	1, 33640.25	0.93
Relationship × Sexual dimorphism	0.46	1, 33639.66	0.5
Condition × Relationship × Sexual dimorphism	1.24	1, 33639.52	0.26
Nakagawa's R^2			
Conditional = 0.17			
Marginal = 0.00038			

4.1.2.1 ANOVA-type table

5 Session info (for reproducibility)

```r
library(pander)
pander(sessionInfo(), locale = FALSE)
```

R version 4.4.1 (2024-06-14)

Platform: x86_64-pc-linux-gnu

attached base packages: *stats4*, *stats*, *graphics*, *grDevices*, *utils*, *datasets*, *methods* and *base*

other attached packages: *pander(v.0.6.5)*, *Hmisc(v.5.1-3)*, *insight(v.0.20.2)*, *effectsize(v.0.8.9)*, *bbmle(v.1.0.25.1)*, *gtools(v.3.9.5)*, *FactoMineR(v.2.11)*, *factoextra(v.1.0.7)*, *scales(v.1.3.0)*, *GGally(v.2.2.1)*, *performance(v.0.12.2)*, *kableExtra(v.1.4.0)*, *emmeans(v.1.10.3)*, *lmerTest(v.3.1-3)*, *lme4(v.1.1-35.5)*, *Matrix(v.1.7-0)*, *readxl(v.1.4.3)*, *ggpubr(v.0.6.0)*, *lubridate(v.1.9.3)*, *forcats(v.1.0.0)*, *stringr(v.1.5.1)*, *dplyr(v.1.1.4)*, *purrr(v.1.0.2)*, *readr(v.2.1.5)*, *tidyr(v.1.3.1)*, *tibble(v.3.2.1)*, *ggplot2(v.3.5.1)*, *tidyverse(v.2.0.0)*, *ggstats(v.0.6.0)*, *MASS(v.7.3-61)*, *car(v.3.1-2)*, *carData(v.3.0-5)* and *knitr(v.1.48)*

loaded via a namespace (and not attached): *gridExtra(v.2.3)*, *rlang(v.1.1.4)*, *magrittr(v.2.0.3)*, *compiler(v.4.4.1)*, *systemfonts(v.1.1.0)*, *vctrs(v.0.6.5)*, *pkgconfig(v.2.0.3)*, *fastmap(v.1.2.0)*, *backports(v.1.5.0)*, *labeling(v.0.4.3)*, *utf8(v.1.2.4)*, *rmarkdown(v.2.28)*, *tzdb(v.0.4.0)*, *nloptr(v.2.1.1)*, *xfun(v.0.47)*, *flashClust(v.1.01-2)*, *highr(v.0.11)*, *parallel(v.4.4.1)*, *broom(v.1.0.6)*, *cluster(v.2.1.6)*, *R6(v.2.5.1)*, *stringi(v.1.8.4)*, *RColorBrewer(v.1.1-3)*, *rpart(v.4.1.23)*, *boot(v.1.3-30)*, *cellranger(v.1.1.0)*, *numDeriv(v.2016.8-1.1)*, *estimability(v.1.5.1)*, *Rcpp(v.1.0.13)*, *bookdown(v.0.40)*, *base64enc(v.0.1-3)*, *parameters(v.0.22.1)*, *nnet(v.7.3-19)*, *splines(v.4.4.1)*, *timechange(v.0.3.0)*, *tidyselect(v.1.2.1)*, *rstudioapi(v.0.16.0)*, *abind(v.1.4-5)*, *yaml(v.2.3.10)*, *lattice(v.0.22-5)*, *plyr(v.1.8.9)*, *withr(v.3.0.1)*, *bayestestR(v.0.14.0)*, *coda(v.0.19-4.1)*, *evaluate(v.0.24.0)*, *foreign(v.0.8-86)*, *xml2(v.1.3.6)*, *pillar(v.1.9.0)*, *checkmate(v.2.3.2)*, *DT(v.0.33)*, *generics(v.0.1.3)*, *hms(v.1.1.3)*, *munsell(v.0.5.1)*, *minqa(v.1.2.7)*, *xtable(v.1.8-4)*, *leaps(v.3.2)*, *glue(v.1.7.0)*, *scatterplot3d(v.0.3-44)*, *tools(v.4.4.1)*, *data.table(v.1.15.4)*, *ggsignif(v.0.6.4)*, *mvtnorm(v.1.2-5)*, *cowplot(v.1.1.3)*, *grid(v.4.4.1)*, *bdsmatrix(v.1.3-7)*, *datawizard(v.0.12.2)*, *colorspace(v.2.1-1)*, *nlme(v.3.1-165)*, *htmlTable(v.2.4.3)*, *Formula(v.1.2-5)*, *cli(v.3.6.3)*, *fansi(v.1.0.6)*, *viridisLite(v.0.4.2)*, *svglite(v.2.1.3)*, *gtable(v.0.3.5)*, *rstatix(v.0.7.2)*, *digest(v.0.6.37)*, *pbkrtest(v.0.5.3)*, *ggrepel(v.0.9.5)*, *htmlwidgets(v.1.6.4)*, *farver(v.2.1.2)*, *htmltools(v.0.5.8.1)*, *lifecycle(v.1.0.4)* and *multcompView(v.0.1-10)*

6 Supplementary references

Kassambara, A., & Mundt, F. (2020). *Factoextra: Extract and visualize the results of multivariate data analyses* [R package version 1.0.7]. https://CRAN.R-project.org/package=factoextra

Kuznetsova, A., Brockhoff, P. B., & Christensen, R. H. B. (2017). lmerTest package: Tests in linear mixed effects models. *Journal of Statistical Software*, *82*(13), 1–26. https://doi.org/10.18637/jss.v082.i13

Lê, S., Josse, J., & Husson, F. (2008). FactoMineR: A package for multivariate analysis. *Journal of Statistical Software*, *25*(1), 1–18. https://doi.org/10.18637/jss.v025.i01

Lenth, R. V. (2024). *Emmeans: Estimated marginal means, aka least-squares means* [R package version 1.10.3]. https://CRAN.R-project.org/package=emmeans

Lüdecke, D., Ben-Shachar, M. S., Patil, I., Waggoner, P., & Makowski, D. (2021). performance: An R package for assessment, comparison and testing of statistical models. *Journal of Open Source Software*, *6*(60), 3139. https://doi.org/10.21105/joss.03139

Wickham, H. (2016). *Ggplot2: Elegant graphics for data analysis*. Springer-Verlag New York. https://ggplot2.tidyverse.org

Wickham, H., Averick, M., Bryan, J., Chang, W., McGowan, L. D., François, R., Grolemund, G., Hayes, A., Henry, L., Hester, J., Kuhn, M., Pedersen, T. L., Miller, E., Bache, S. M., Müller, K., Ooms, J., Robinson, D., Seidel, D. P., Spinu, V., … Yutani, H. (2019). Welcome to the tidyverse. *Journal of Open Source Software*, *4*(43), 1686. https://doi.org/10.21105/joss.01686

Wickham, H., François, R., Henry, L., Müller, K., & Vaughan, D. (2023). *Dplyr: A grammar of data manipulation* [R package version 1.1.4]. https://CRAN.R-project.org/package=dplyr

Wolen, A. R., Hartgerink, C. H., Hafen, R., Richards, B. G., Soderberg, C. K., & York, T. P. (2020). osfr: An R interface to the open science framework. *Journal of Open Source Software*, *5*(46), 2071. https://doi.org/10.21105/joss.02071

Xie, Y. (2014). Knitr: A comprehensive tool for reproducible research in R [ISBN 978-1466561595]. In V. Stodden, F. Leisch, & R. D. Peng (Eds.), *Implementing reproducible computational research*. Chapman and Hall/CRC. https://doi.org/10.1201/9781315373461-1

Zhu, H. (2020). *Kableextra: Construct complex table with 'kable' and pipe syntax* [R package version 1.3.1]. https://CRAN.R-project.org/package=kableExtra