

Body temperature investigation

DAPR1 staff

1 Introduction

Will be added in the next weeks during the live R...

2 Analysis

Figure 1 shows that the body temperatures of the sample of 50 healthy individuals follow roughly a bell-shaped distribution, with most values between 36.5 and 37.5 °C and fewer in the tails of the distribution. No values were lower than 35.75 or larger than 38.22. The average body temperature in the sample was 36.81 °C, see Table 1, with a SE of 0.06 and 95% CI [36.69, 36.93]. Hence, we are 95% confident that the average body temperature for a healthy individual is between 36.69 °C and 36.93 °C.

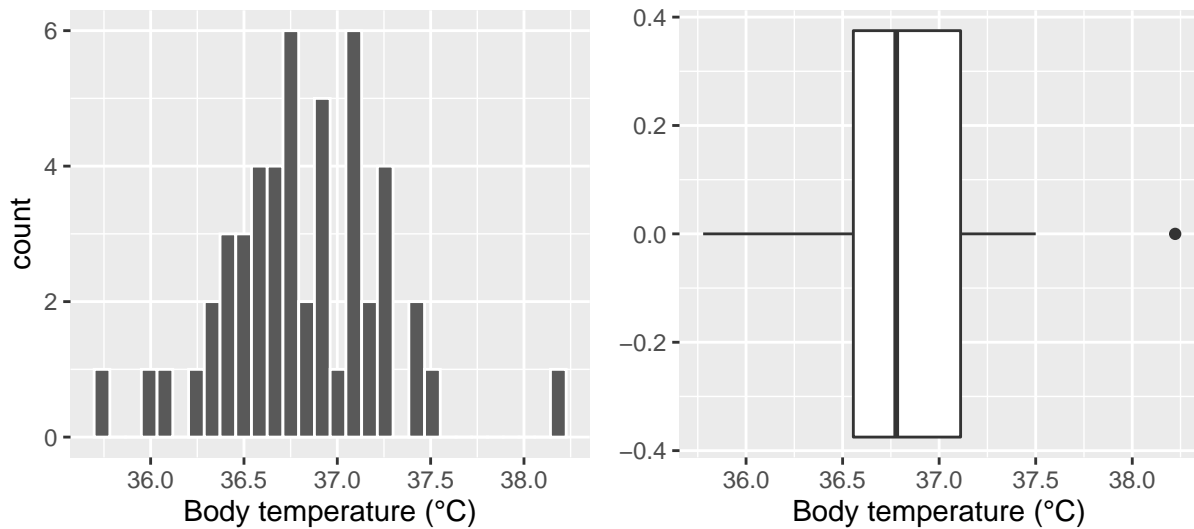


Figure 1: Distribution of body temperatures (°C)

Table 1: Descriptive statistics of body temperatures (°C)

n	M	SD	Min	Max
50	36.81	0.43	35.78	38.22

3 Discussion

Will be added in the next weeks during the live R...

4 Appendix

```
knitr::opts_chunk$set(echo = FALSE, message = FALSE, warning = FALSE)
# week 1 code
library(tidyverse)
library(patchwork)
library(kableExtra)

temp_data <- read_csv("https://uoepsy.github.io/data/BodyTemp.csv")

temp_data <- temp_data %>%
  select(BodyTemp)

dim(temp_data)
head(temp_data)
glimpse(temp_data) # str()
summary(temp_data)

plt.h <- ggplot(temp_data, aes(x = BodyTemp)) +
  geom_histogram(color = 'white') +
  labs(x="Body temperature (°C)")
plt.h

plt.d <- ggplot(temp_data, aes(x = BodyTemp)) +
  geom_density() +
  labs(x="Body temperature (°C)")
plt.d

plt.b <- ggplot(temp_data, aes(x = BodyTemp)) +
  geom_boxplot() +
  labs(x="Body temperature (°C)")
plt.b

plt.h | plt.b

# Option 1: with a descriptives table
stats <- temp_data %>%
  summarise(
    n = n(),
    M = mean(BodyTemp),
    SD = sd(BodyTemp),
    Min = min(BodyTemp),
    Max = max(BodyTemp)
  )
stats

tstar <- qt(c(0.025, 0.975), df = stats$n - 1)
```

```

stats$M + tstar * (stats$SD / sqrt(stats$n))

# Option 2: creating each variable
xbar <- mean(temp_data$BodyTemp)
n <- nrow(temp_data)
s <- sd(temp_data$BodyTemp)
se <- s / sqrt(n)
tstar <- qt(c(0.025, 0.975), df = n - 1)
xbar + tstar * se
plt.h | plt.b
kbl(stats, booktabs = TRUE, digits = 2,
      caption = "Descriptive statistics of body temperatures (°C)")

```