

Effects of Different Pain Relievers and Dosages on Cognitive Retention

Navya Hooda Mohammed Yusuf Shaikh Shivank Goel
Vanshika Vanshika Jena Shah

February 27, 2025

```
# Compute summary statistics individually
m1_game_before <- mean(clean_data$game_before, na.rm = TRUE)
m2_game_before <- median(clean_data$game_before, na.rm = TRUE)
m3_game_before <- sd(clean_data$game_before, na.rm = TRUE)
m4_game_before <- IQR(clean_data$game_before, na.rm = TRUE)

m1_game_after <- mean(clean_data$game_after, na.rm = TRUE)
m2_game_after <- median(clean_data$game_after, na.rm = TRUE)
m3_game_after <- sd(clean_data$game_after, na.rm = TRUE)
m4_game_after <- IQR(clean_data$game_after, na.rm = TRUE)

m1_cards_before <- mean(clean_data$cards_before, na.rm = TRUE)
m2_cards_before <- median(clean_data$cards_before, na.rm = TRUE)
m3_cards_before <- sd(clean_data$cards_before, na.rm = TRUE)
m4_cards_before <- IQR(clean_data$cards_before, na.rm = TRUE)

m1_cards_after <- mean(clean_data$cards_after, na.rm = TRUE)
m2_cards_after <- median(clean_data$cards_after, na.rm = TRUE)
m3_cards_after <- sd(clean_data$cards_after, na.rm = TRUE)
m4_cards_after <- IQR(clean_data$cards_after, na.rm = TRUE)

# Combine into a table
summary_table <- data.frame(
  Statistic = c("Mean", "Median", "SD", "IQR"),
  Game_Before = c(m1_game_before, m2_game_before, m3_game_before, m4_game_before),
  Game_After = c(m1_game_after, m2_game_after, m3_game_after, m4_game_after),
  Cards_Before = c(m1_cards_before, m2_cards_before, m3_cards_before, m4_cards_before),
```

```

Cards_After = c(m1_cards_after, m2_cards_after, m3_cards_after, m4_cards_after)
)

# Ensure the table prints correctly
print(summary_table)

```

```

Statistic Game_Before Game_After Cards_Before Cards_After 1 Mean 62.37095 62.13476
8.128571 8.042857 2 Median 60.50000 61.10000 9.000000 9.000000 3 SD 15.73766 15.48217
1.918842 1.917702 4 IQR 23.07500 23.22500 3.000000 2.750000

```

```

# Display formatted table using kable
kable(summary_table,
       caption = "Summary Statistics for Quantitative Variables",
       align = "c") |> print()

```

Table 1: Summary Statistics for Quantitative Variables

Statistic	Game_Before	Game_After	Cards_Before	Cards_After
Mean	62.37095	62.13476	8.128571	8.042857
Median	60.50000	61.10000	9.000000	9.000000
SD	15.73766	15.48217	1.918842	1.917702
IQR	23.07500	23.22500	3.000000	2.750000

1 Introduction

2 References