

Core Questions

```
##           x freq
## 1 Every 1-2 hours 181
## 2 Every 3-4 hours 168
## 3      Every hour  36
## 4          Other   28
```

```
## [1] "About the same"      "Less"                "More"
## [4] "Significantly less" "Significantly more"
```

```
##           x freq
## 1      East    40
## 2 Midwest    77
## 3      South 212
## 4      West   78
## 5      <NA>    6
```

```
levels(factor(Core_Questions$State))
```

```
## [1] "East"      "Midwest" "South"   "West"
```

```
levels(factor(Core_Questions$S_D_E))
```

```
## [1] "Other"          "Three months" "Two months"
```

```
levels(factor(Core_Questions$RO_F_EG))
```

```
## [1] "1-25%"          "25-50%"          "50-75%"          "75-100%"
## [5] "Fully funded" "Not funded"
```

```
levels(factor(Core_Questions$Deadline_today))
```

```
## [1] ""      "No"    "Yes"
```

```
levels(factor(Core_Questions$Workload_today))
```

```
## [1] ""      "Heavy"  "Light"  "Standard"
```

```
levels(factor(Core_Questions$Workplace))
```

```
## [1] "Home"    "Office" "Other"
```

```
levels(factor(Core_Questions$R_Style))
```

```
## [1] "Hands-off" "Hands-on"
```

```

levels(factor(Core_Questions$TW_W_H))

## [1] "< 30" "> 50" "30-40" "40-50"

levels(factor(Core_Questions$Break))

## [1] "Every 1-2 hours" "Every 3-4 hours" "Every hour" "Other"

levels(factor(Core_Questions$Email))

## [1] "Reply instantly" "Reply Once/Twice"

levels(factor(Core_Questions$funding_proposal))

## [1] "No" "Yes"

levels(factor(Core_Questions$A_N_Pro))

## [1] "" ">=10" "1-2" "3-4" "5-6" "7-9"

levels(factor(Core_Questions$funding_agency))

## [1] "DOD" "DOE" "NASA" "NIH" "NSF" "Other"

levels(factor(Core_Questions$Success))

## [1] "" "< 10%" "> 90%" "10-20%" "20-30%" "30-50%" "50-75%" "75-90%"

levels(factor(Core_Questions$Com_Proposal))

## [1] "" "< 1 week" "> 2 months" "1-2 months" "1-2 weeks"
## [6] "2-4 weeks"

levels(factor(Core_Questions$L_Of_SR))

## [1] "" "< 1 month" "> 12 months" "1-3 months" "3-6 months"
## [6] "6-12 months"

levels(factor(Core_Questions$W_WB_PD))

## [1] "" "About the same" "Less"
## [4] "More" "Significantly less" "Significantly more"

```

```

levels(factor(Core_Questions$Submit_P))

## [1] "1-3 hours before"      "1 day before"          "2 or more days before"
## [4] "3-6 hours before"      "Minutes before"

levels(factor(Core_Questions$Stress_PD))

## [1] "About the same"      "Less"                  "More"
## [4] "Significantly less" "Significantly more"

levels(factor(Core_Questions$refereed_conference))

## [1] "No"  "Yes"

levels(factor(Core_Questions$A_N_Conf_Pap))

## [1] ""      ">= 10" "1-2"   "3-4"   "5-6"   "7-9"

levels(factor(Core_Questions$core_rank))

## [1] ""      "A"     "A*"    "B"     "C"

levels(factor(Core_Questions$if_you_submit_manuscripts))

## [1] ""      "< 10%" "> 90%"  "10-20%" "20-30%" "30-50%" "50-75%" "75-90%"

levels(factor(Core_Questions$far_in_advance_do_you))

## [1] ""      "< 1 week"  "> 2 months" "1-2 months" "1-2 weeks"
## [6] "2-4 weeks"

levels(factor(Core_Questions$length_of_supp))

## [1] ""      "< 1 month"  "> 12 months" "1-3 months"  "3-6 months"
## [6] "6-12 months"

levels(factor(Core_Questions$in_the_week_leading_to_a_c))

## [1] ""      "About the same"      "Less"
## [4] "More"      "Significantly less" "Significantly more"

levels(factor(Core_Questions$you_typically_subm))

## [1] "1-3 hours before"      "1 day before"          "2 or more days before"
## [4] "3-6 hours before"      "Minutes before"

```

```
levels(factor(Core_Questions$ss_level_in_a_fundi))
```

```
## [1] "About the same"      "More"                  "Significantly less"  
## [4] "Significantly more"
```

```
count(Core_Questions$funding_agency)
```

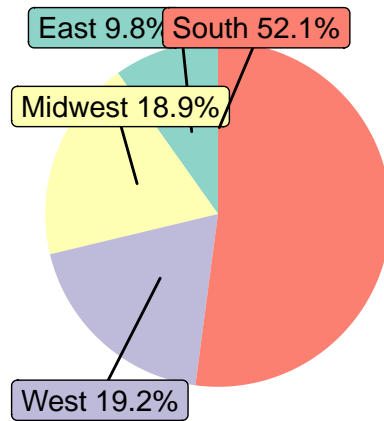
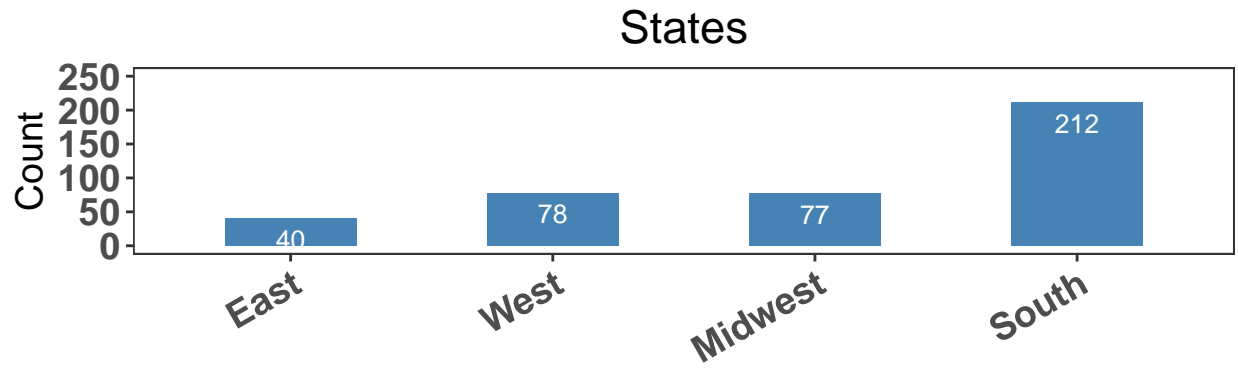
```
##      x freq  
## 1   DOD   20  
## 2   DOE   22  
## 3  NASA   11  
## 4   NIH   68  
## 5   NSF  242  
## 6 Other   50
```

```
# #####Test a single core questions  
#   temp <- count(Core_Questions$Workload_today)  
#   colnames(temp) <- c("item", "count")  
#   temp <- temp[!(temp$item == ""),]  
#  
#   bar_plot <- ggplot(data = temp, aes(x = item, y = count)) +  
#     geom_bar(stat = "identity",  
#             width = 0.5,  
#             fill = "steelblue") +  
#     theme_minimal() +  
#     scale_y_continuous(breaks = seq(0, ylimit, by = 5),  
#                       limits = c(0, ylimit)) +  
#     labs(x = "", y = "Participant count", title = title_list[i - 1]) +  
#     theme(  
#       panel.grid.major = element_blank(),  
#       panel.grid.minor = element_blank(),  
#       plot.title = element_text(hjust = 0.5),  
#       axis.text.x = element_text(  
#         face = "bold",  
#         size = 10 ,  
#         angle = 30,  
#         hjust = 1  
#       ),  
#       axis.text.y = element_text(face = "bold", size = 10)  
#     ) +  
#     scale_x_discrete( limits=list[[1]])  
#  
#   bar_plot
```

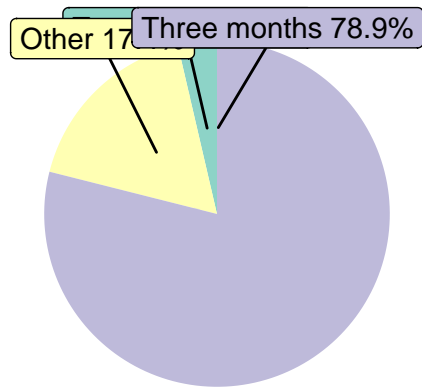
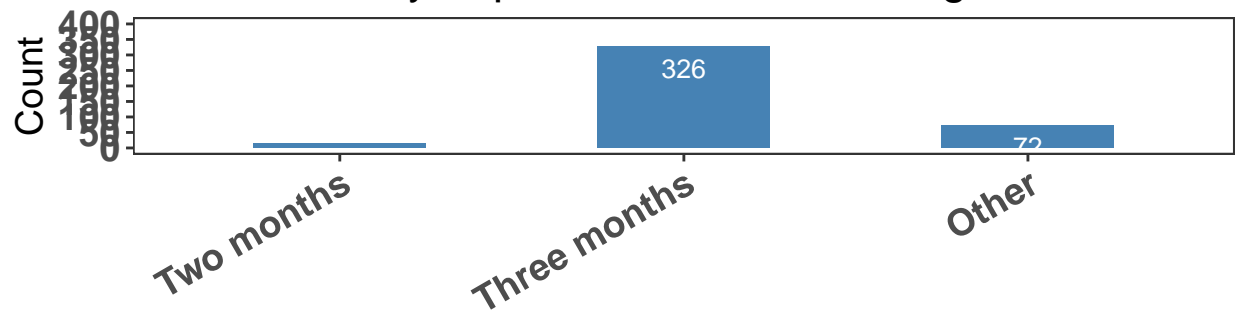
```
## [1] "state_do_you_reside"
```

```
## Warning: Removed 1 rows containing missing values (position_stack).
```

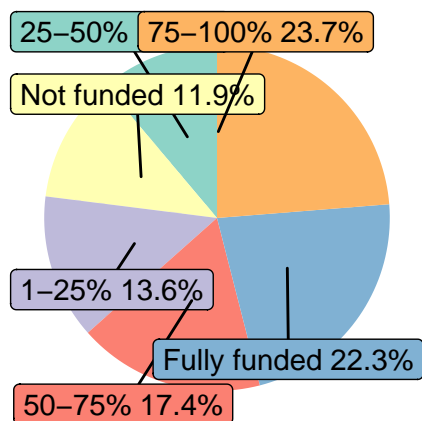
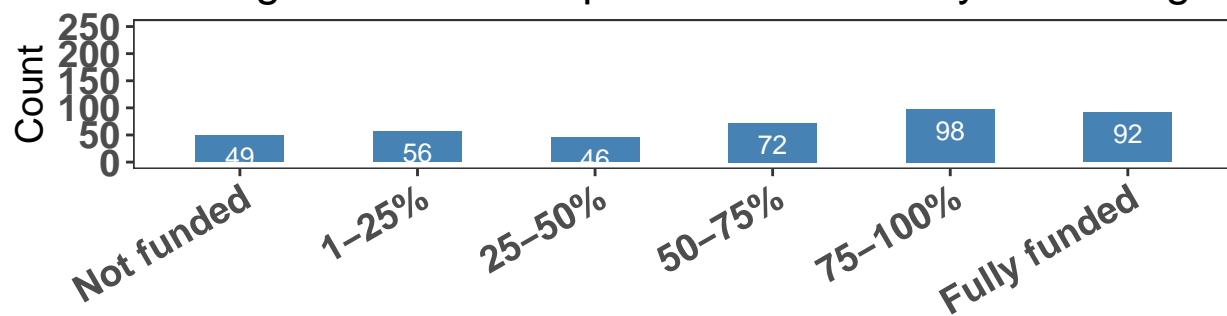
```
## Warning: Removed 1 rows containing missing values (geom_text).
```



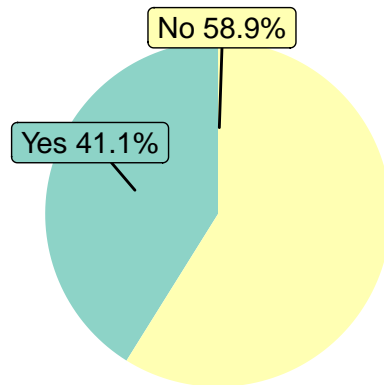
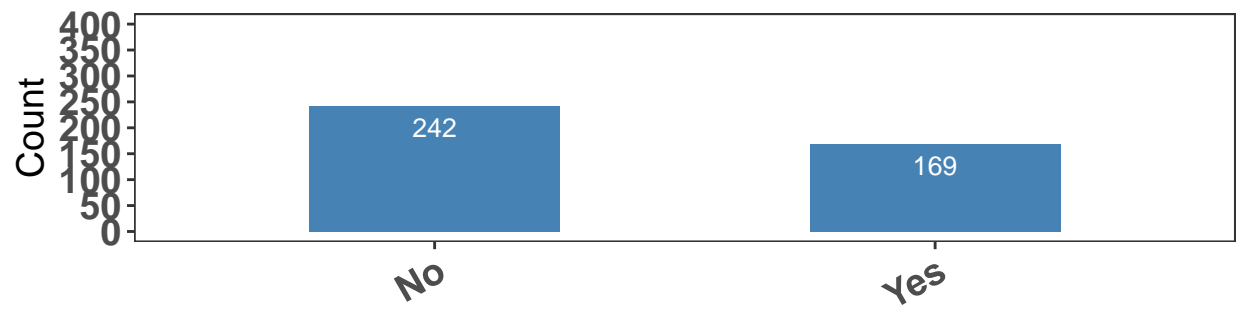
Salary dependance on external grants

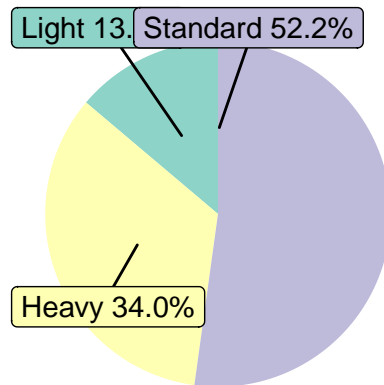
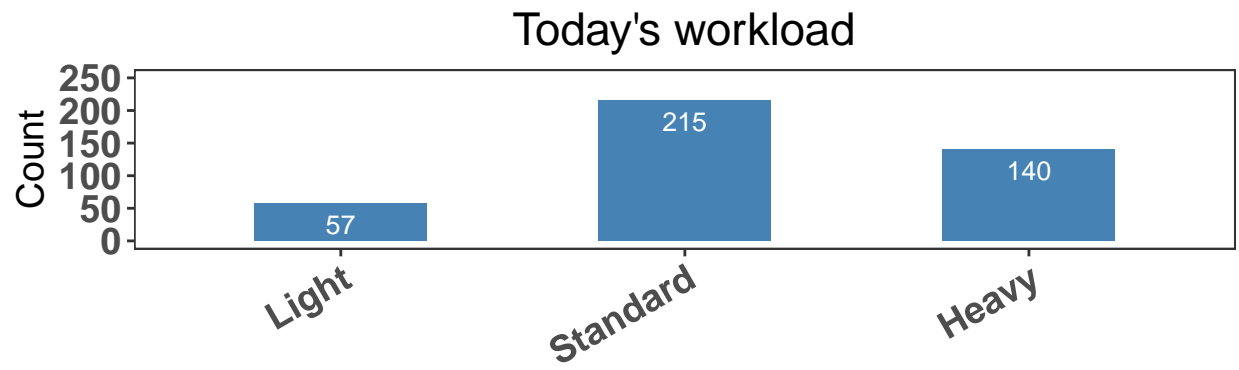


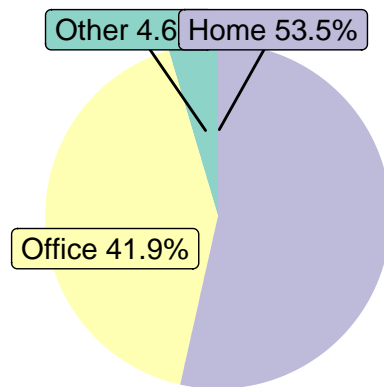
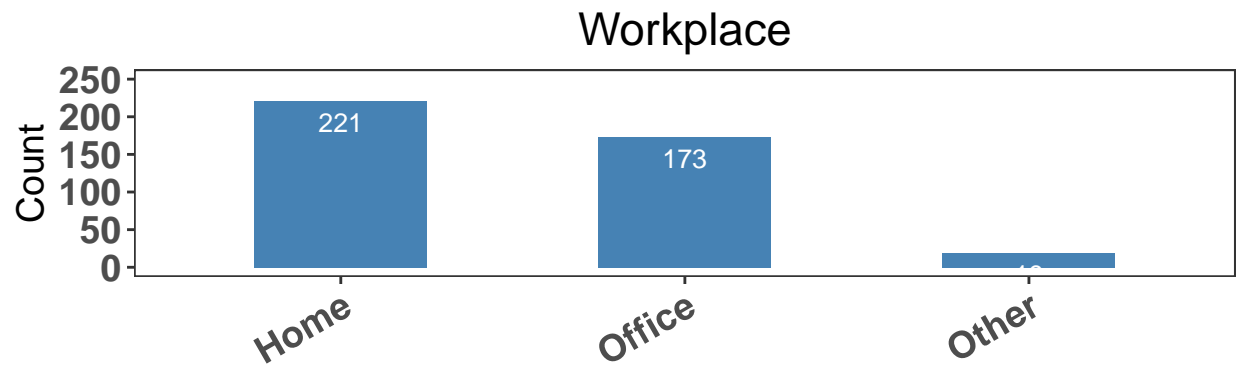
Percentage of research operations funded by external gran

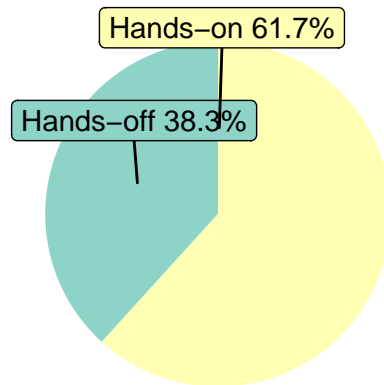
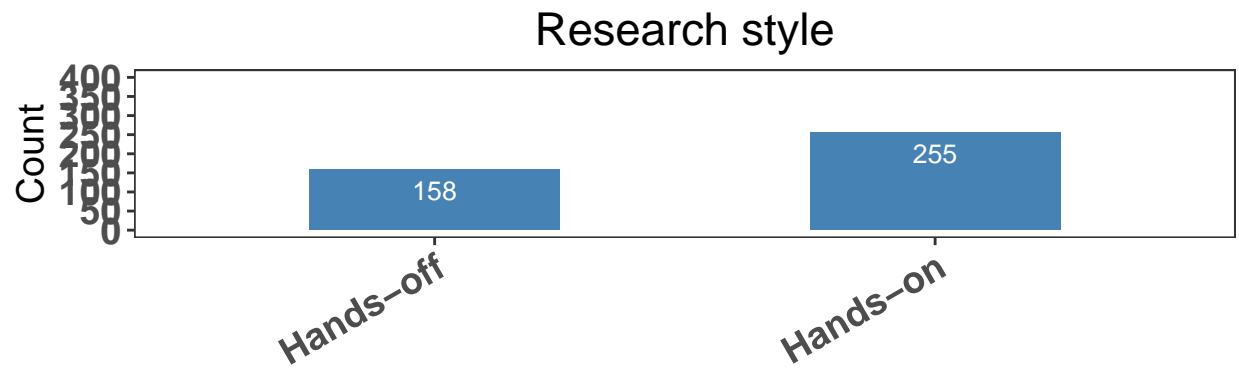


Any looming deadline– Today/Next couple of days?

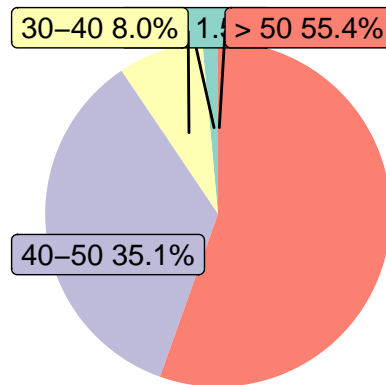
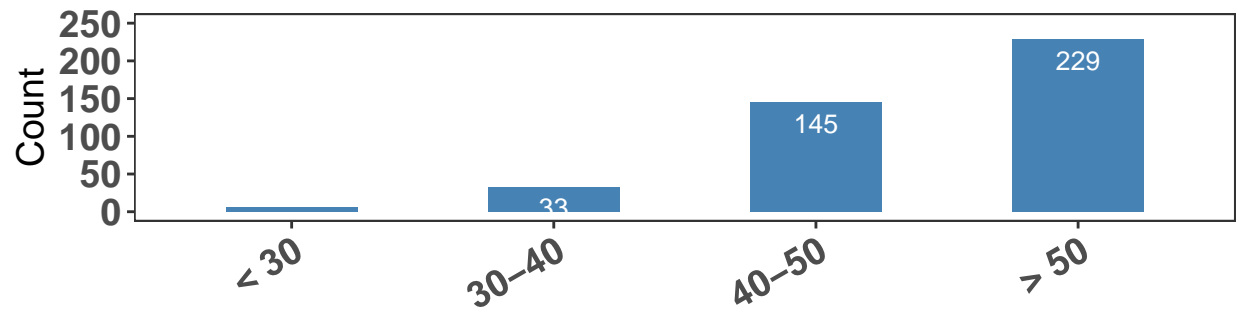


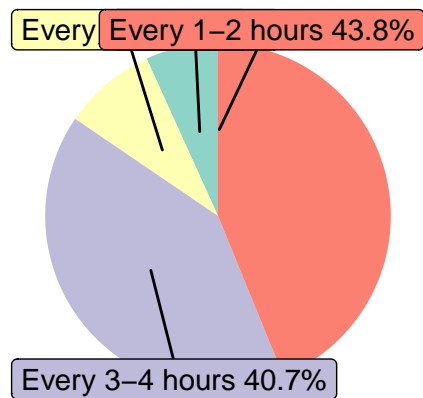
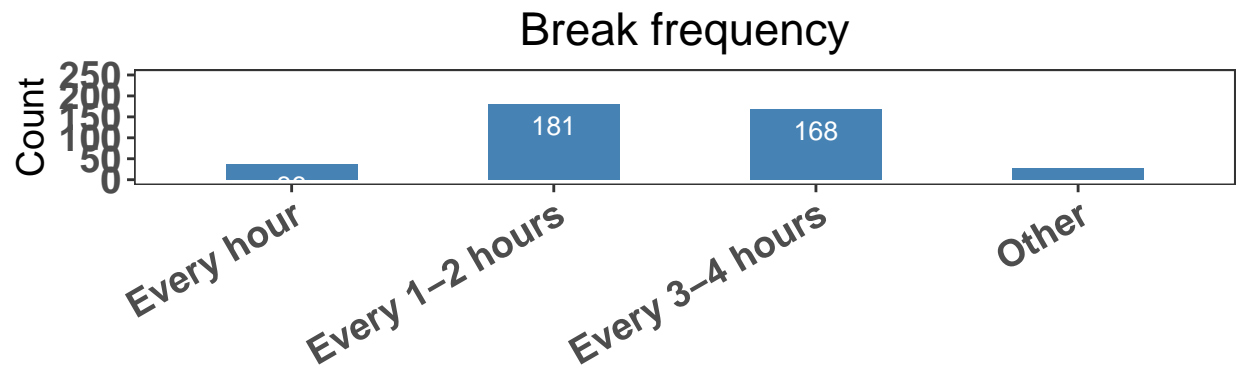


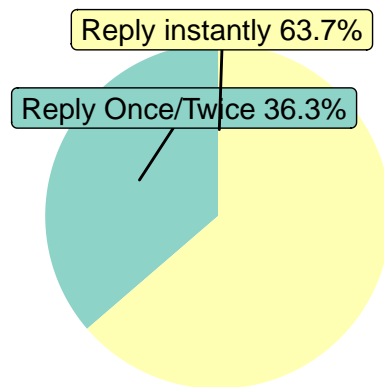
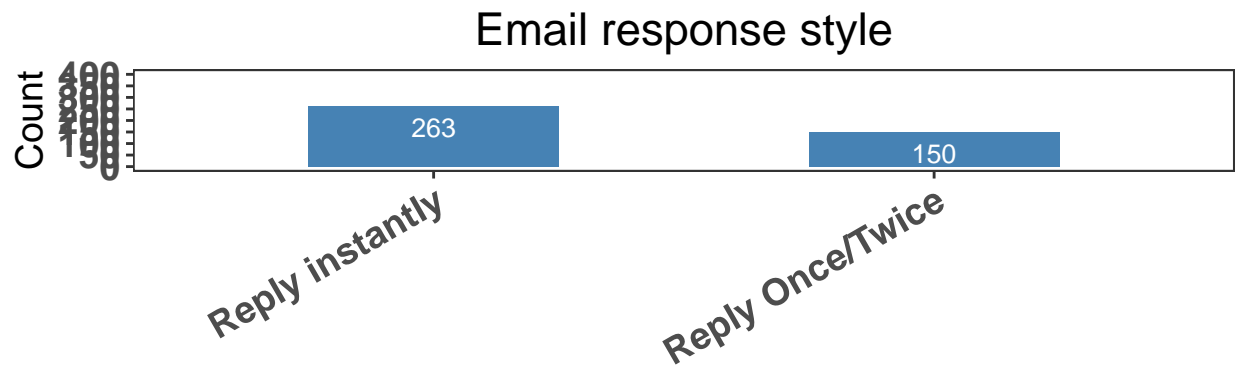




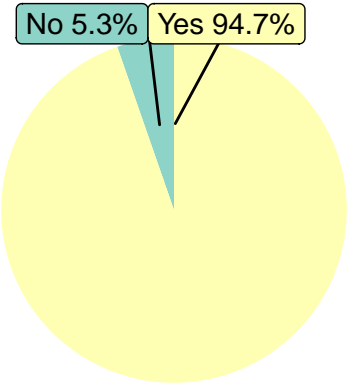
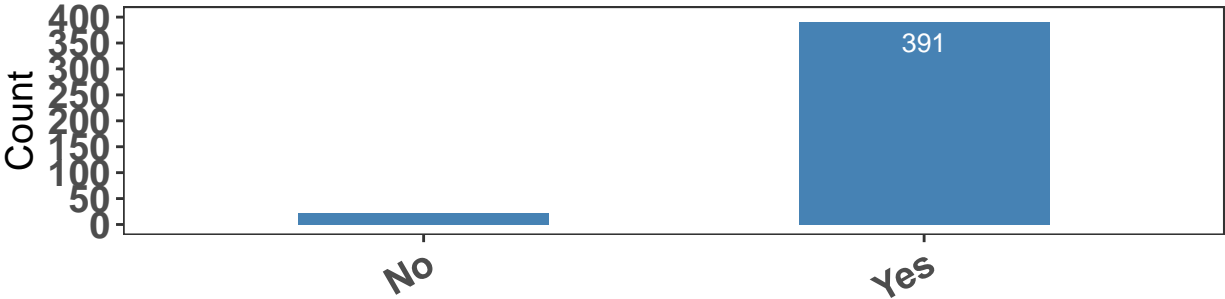
Working hours– In a typical week

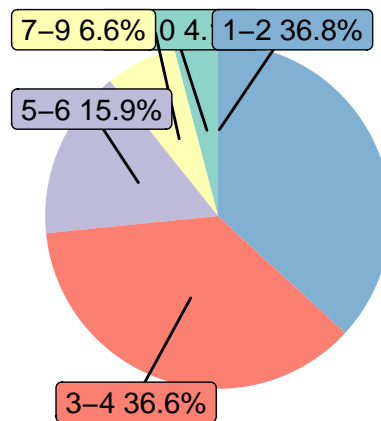
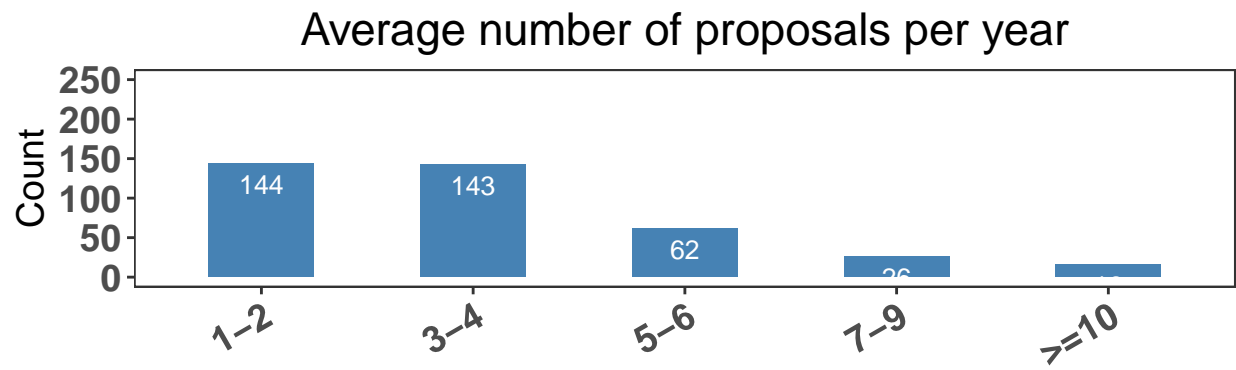


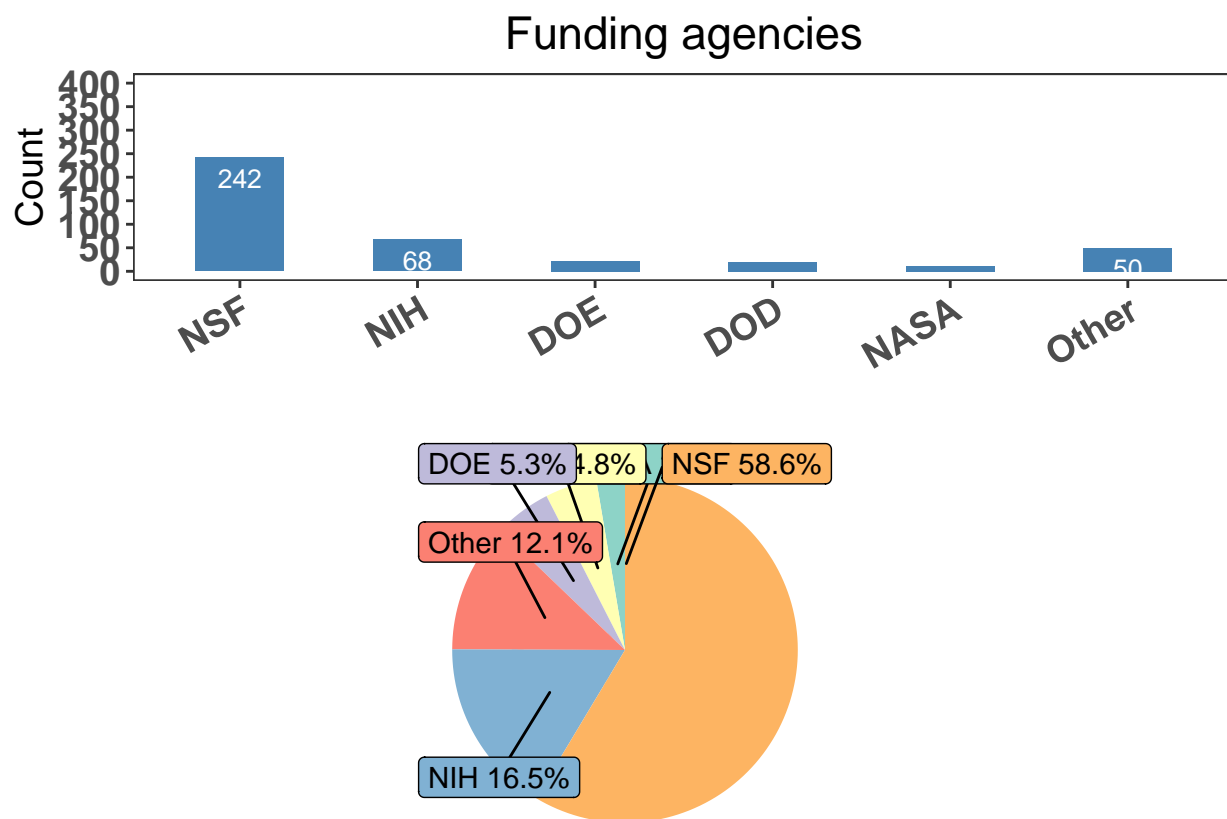




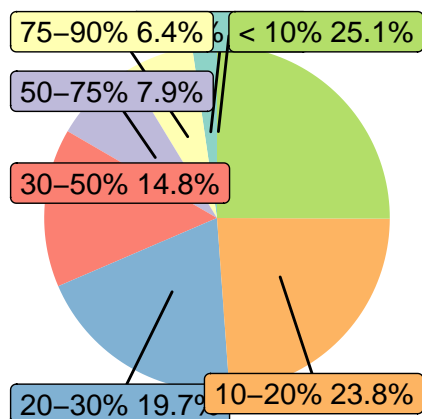
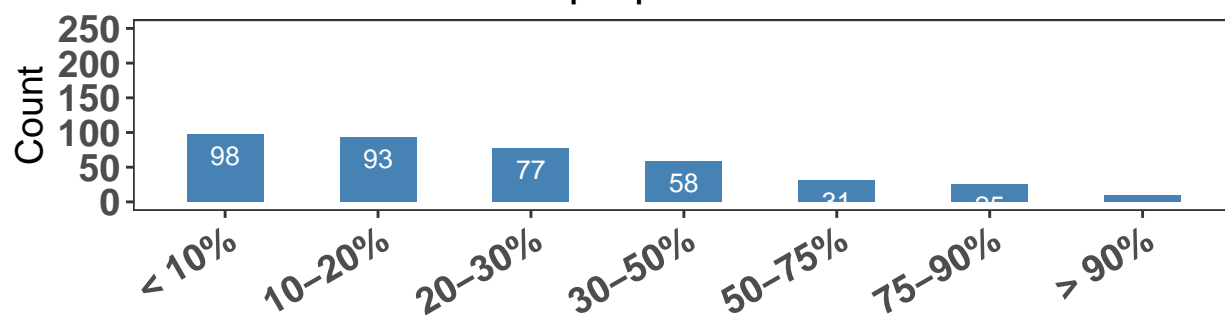
Participants submitting funding proposals

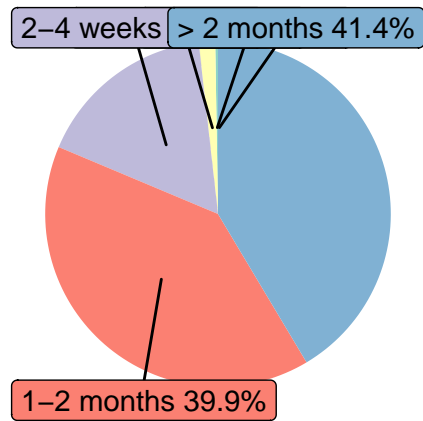
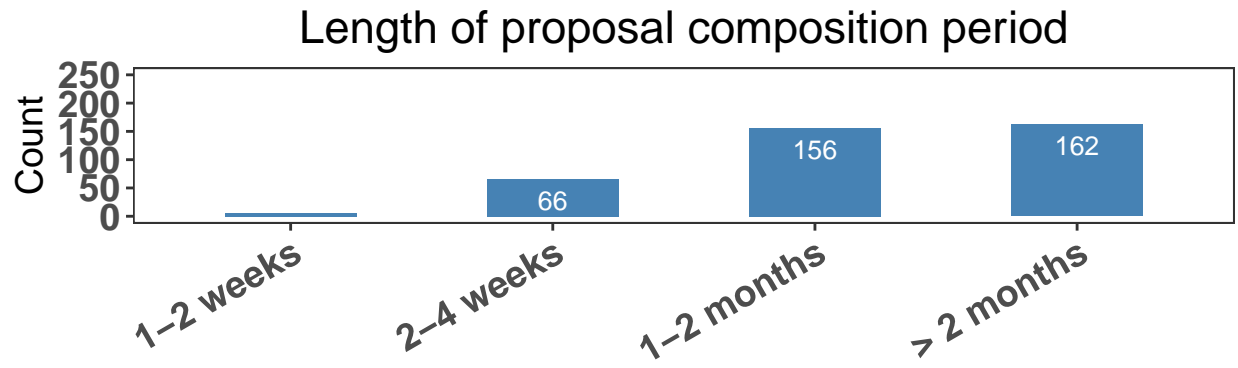




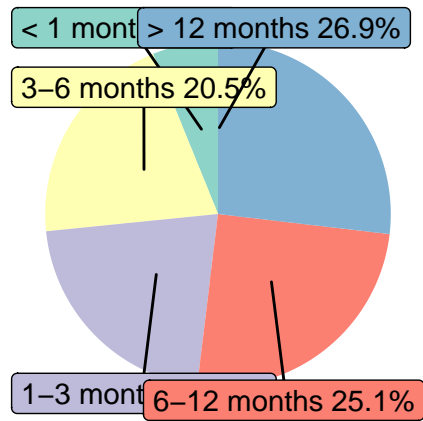
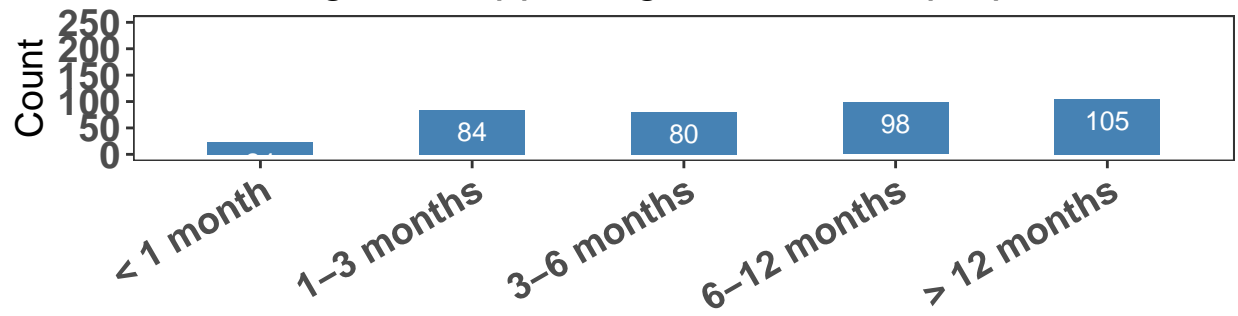


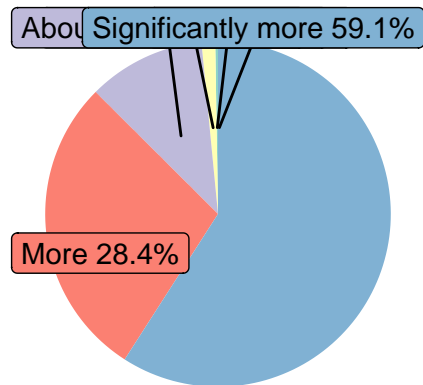
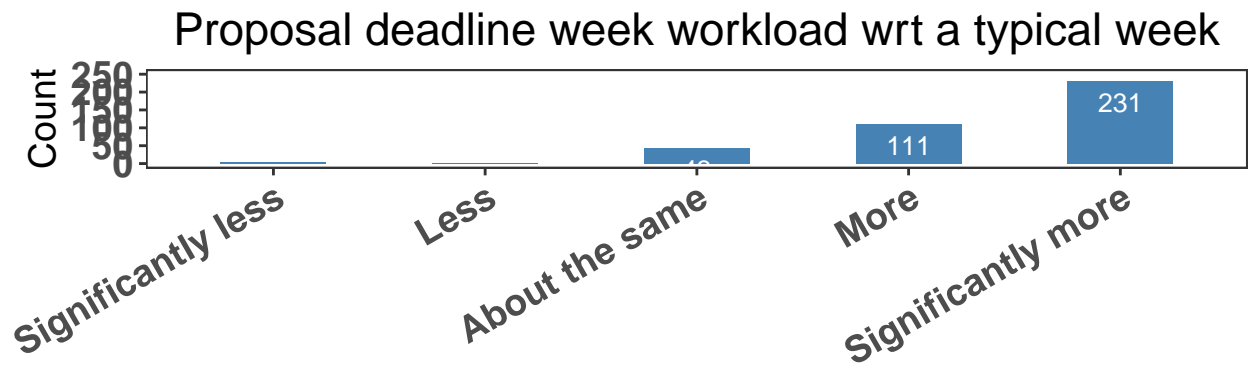
Perceived proposal success rate

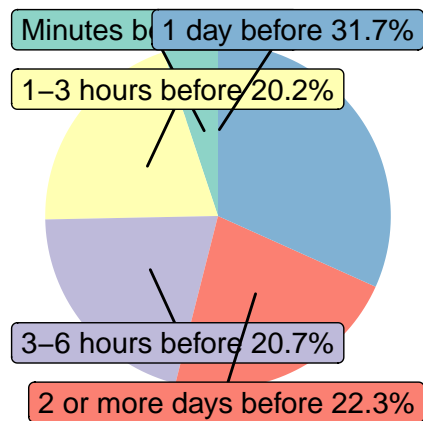
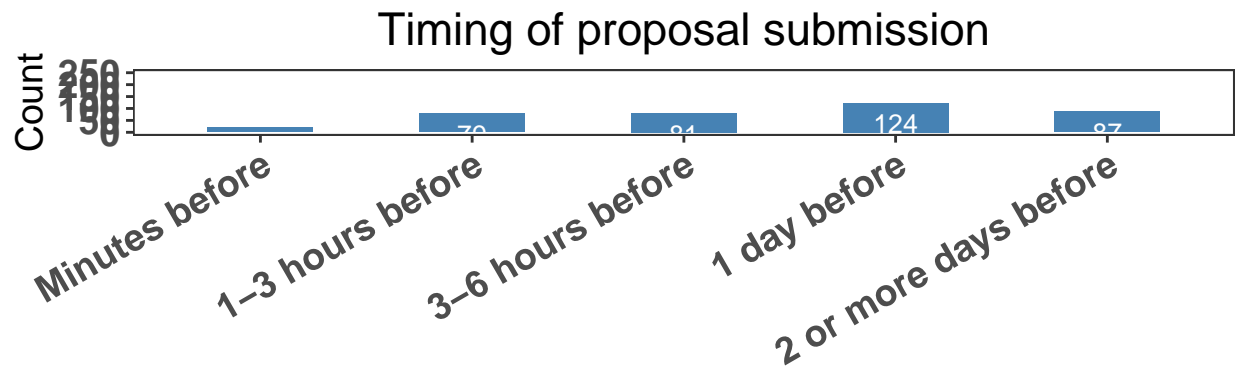


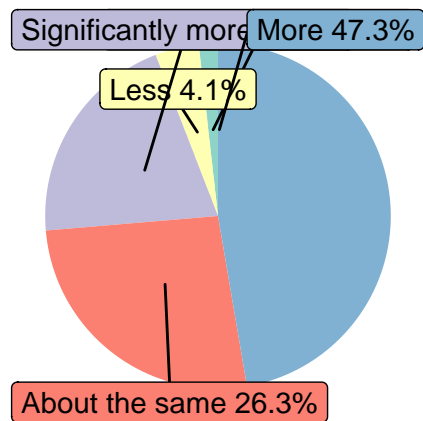
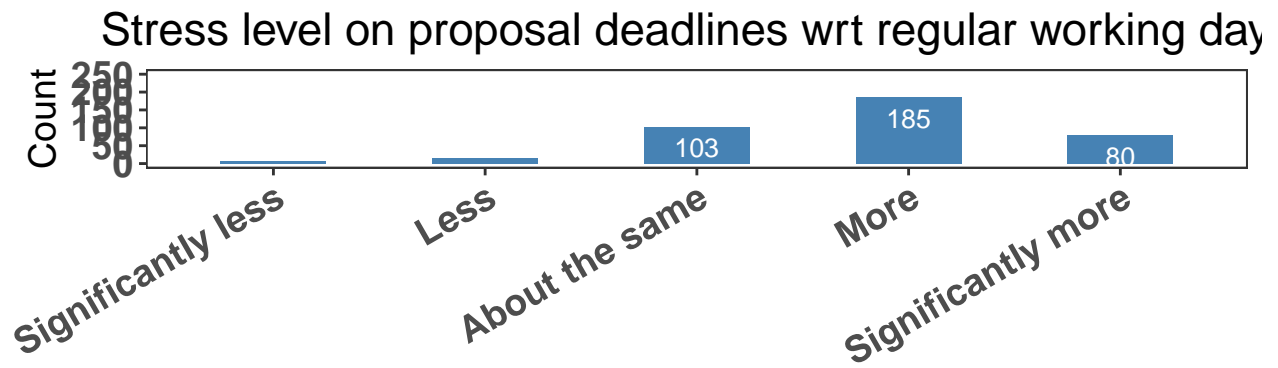


Length of supporting research for proposals

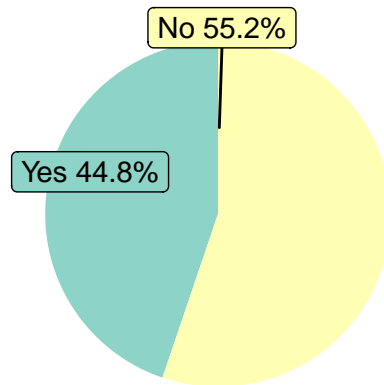
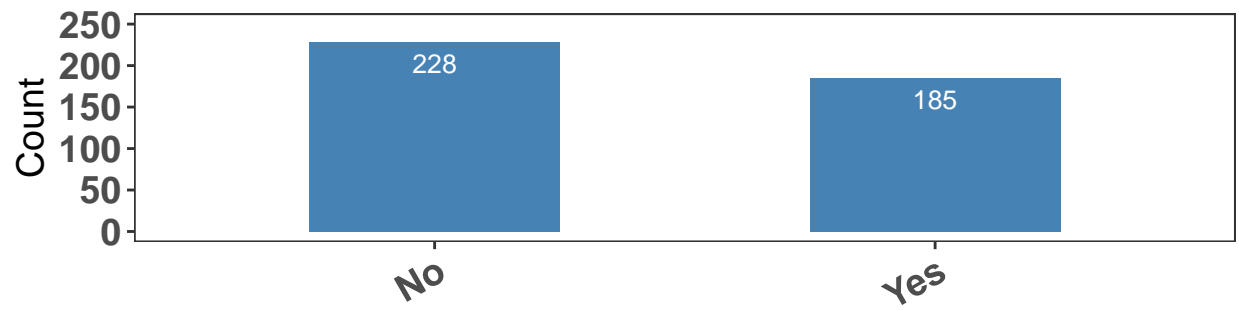




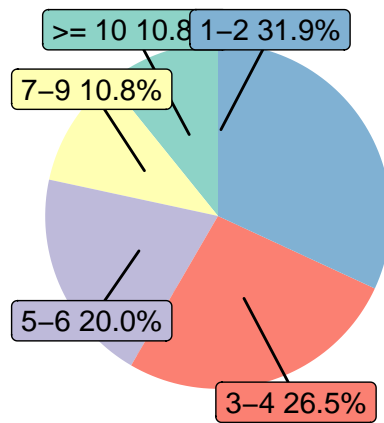
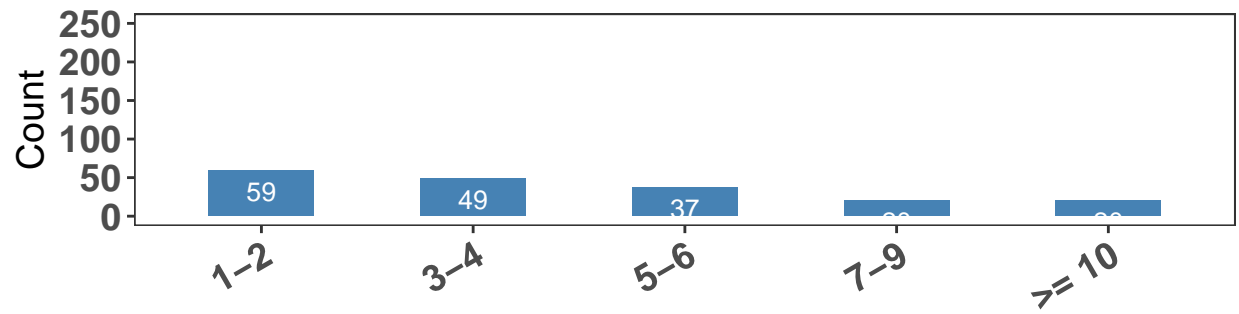




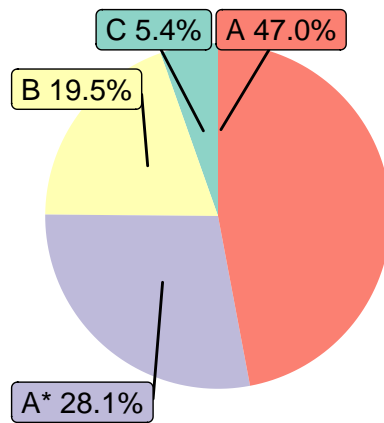
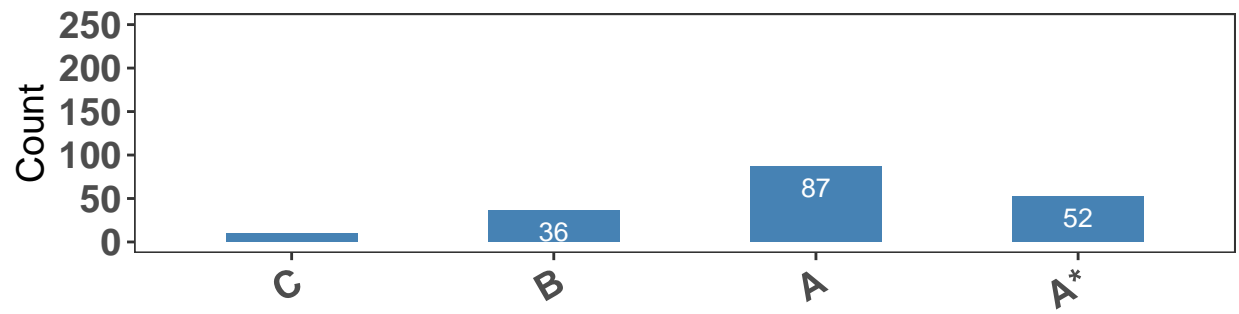
Participants submitting papers in refereed conferences



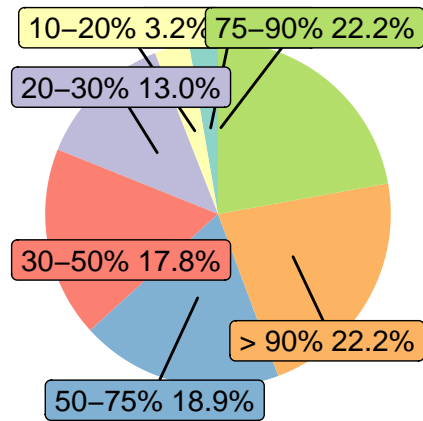
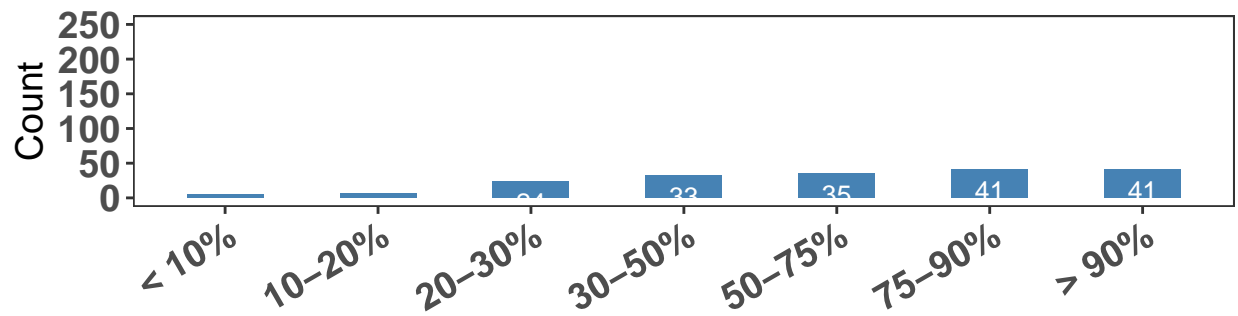
Average number of conference papers per year



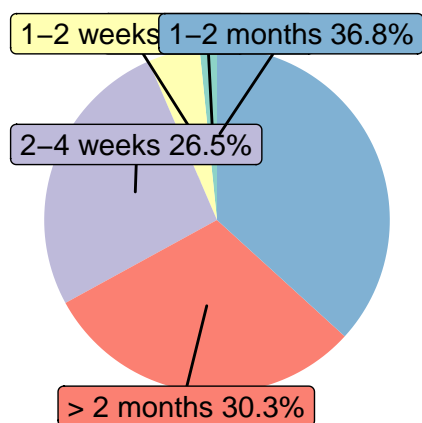
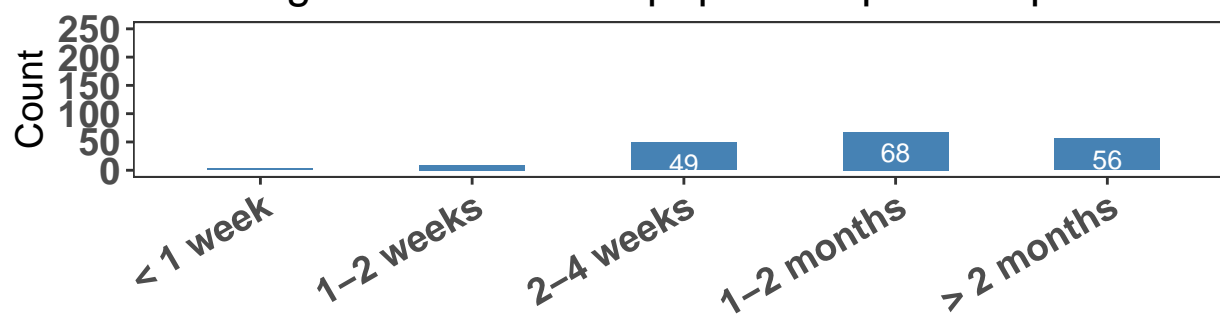
CORE rank of conferences

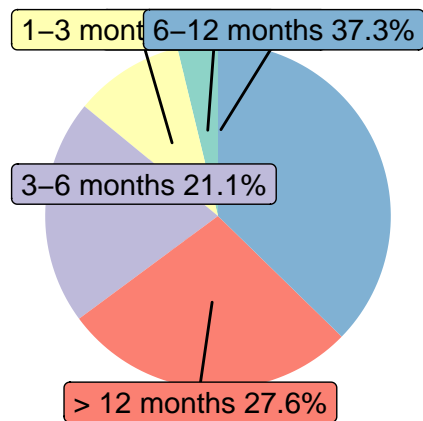
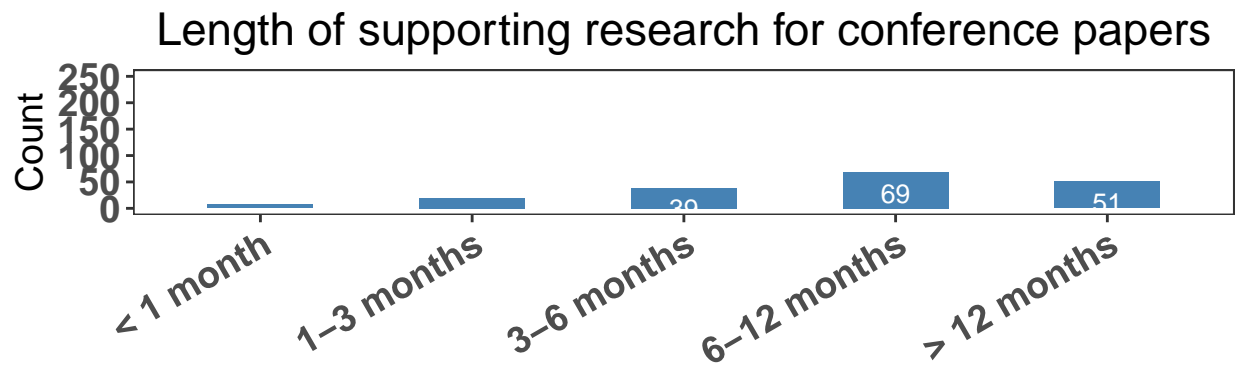


Perceived success rate in conference submissions

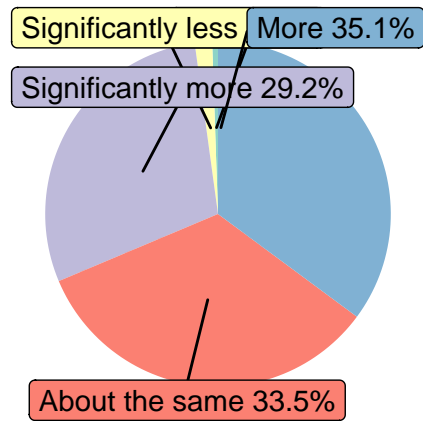
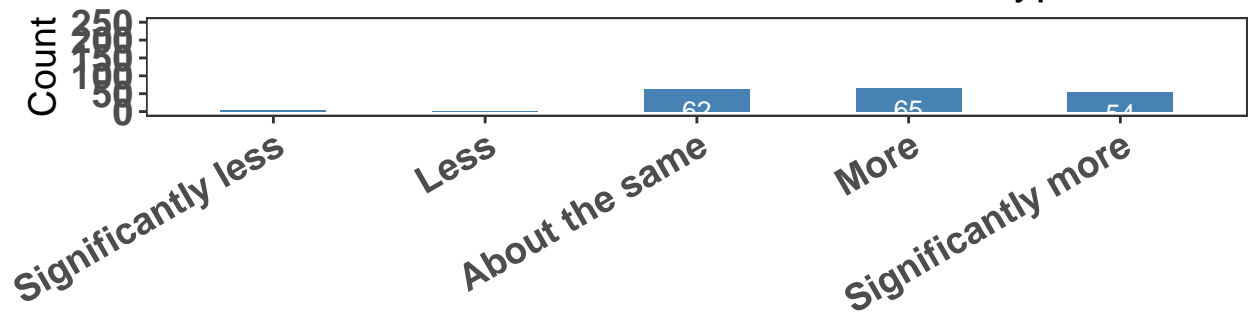


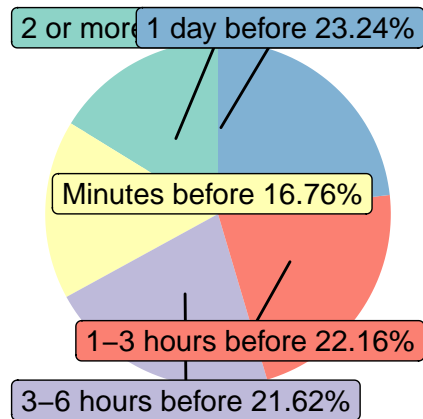
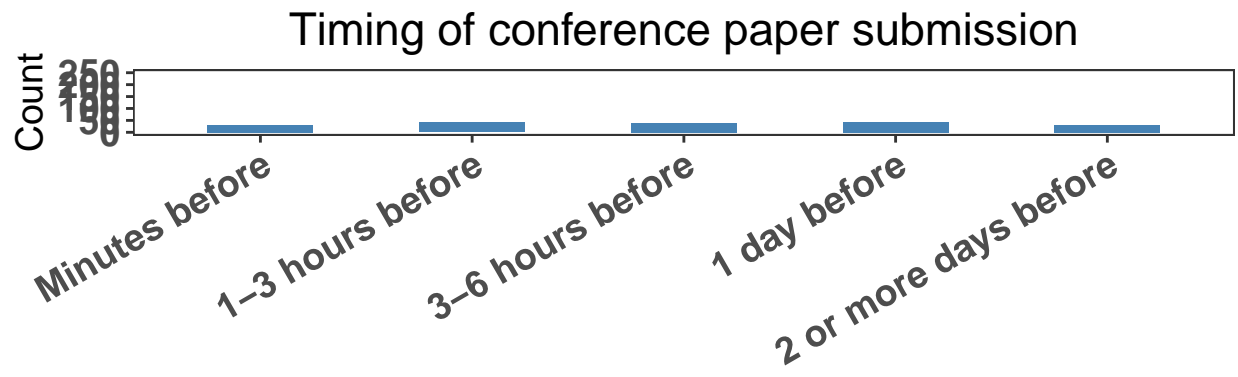
Length of conference paper composition period



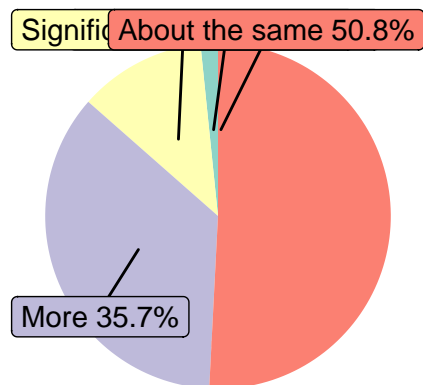
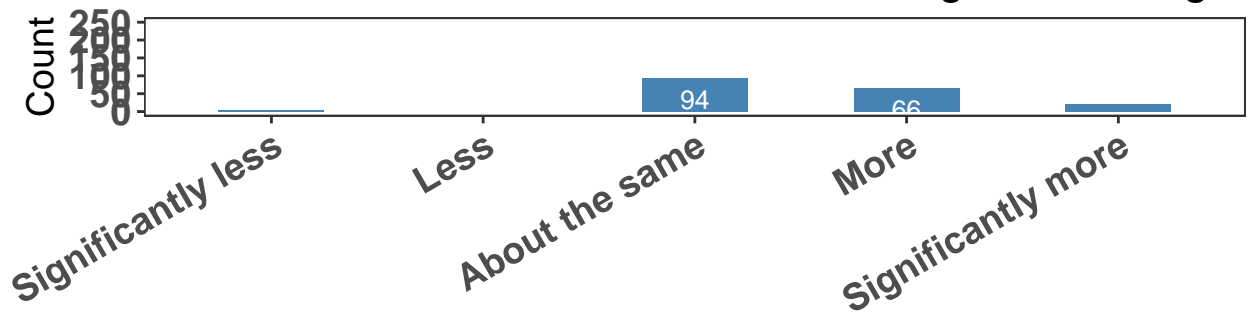


Conference deadline week workload wrt a typical week





Stress level on conference deadlines wrt regular working day



```
Data_CQ <- Core_Questions[,c(13, 16, 9, 10, 18, 20)]
```

```
file_name='Selected_Core_Questions.csv'
write.csv(Data_CQ,file.path(curated_data_dir, file_name), row.names = FALSE)
```

```
# ylim= 150
# temp <- count(Core_Questions[14])
# colnames(temp) <- c("item", "count")
# temp <- temp[!(temp$item == ""),]
# temp <- temp[order(temp$count), ]
# temp <- temp[complete.cases(temp),]
#
#
# bar_plot <- ggplot(data = temp, aes(x = item, y = count)) +
#   geom_bar(stat = "identity",
#           width = 0.5,
#           fill = "steelblue") +
#   theme_bw() +
#   scale_y_continuous(breaks = seq(0, ylim, by = 50),
#                     limits = c(0, ylim)) +
#   labs(x = "", y = "Count", title = "Funding Agencies") +
#   theme(
#     panel.grid.major = element_blank(),
#     panel.grid.minor = element_blank(),
#     plot.title = element_text(hjust = 0.5),
#     axis.text.x = element_text(
```



```

#       face = "bold",
#       size = 10 ,
#       angle = 30,
#       hjust = 1
#     ),
#     axis.text.y = element_text(face = "bold", size = 10)
#   )
#   # +scale_x_discrete( limits=Ticks_list[[i-1]])
#
#   bar_plot
#
#   # plot_list[[length(plot_list) + 1]] <- bar_plot
#
#   temp <- temp %>%
#   mutate(
#     cs = rev(cumsum(rev(count))),
#     prop = percent(count / sum(count)),
#     pos = count/2 + lead(cs, 1),
#     pos = if_else(is.na(pos), count/2, pos))
#   temp$pos[is.na(temp$pos)] <- 1
#
#   # temp<-temp[match(order_list[[1]], temp$item),]
#
#   pichart <-ggplot(temp, aes(x = "" , y = count, fill = item)) +
#   geom_col(width = 1) +
#   coord_polar(theta = "y", start = 0 ) +
#   scale_fill_brewer(palette = "Set3", direction = -4) +
#   geom_label_repel(aes(y = pos, label =paste0(item," " ,prop)), data = temp, size=4, show.legend = F,
#   theme_void() +
#   theme(legend.position = "none", legend.title = element_blank())+
#   labs(title = "")+
#   theme(panel.grid.major = element_blank(),panel.grid.minor = element_blank(),plot.title = element_te
#
#   pichart
#
#
#
#   plots_act=ggarrange(bar_plot, pichart, nrow = 2, ncol = 1)
#
#   # final_plot<-plot_grid(plots_act[[i]])
#   filename<-"FA.pdf"
#   full_path<-file.path(plot_dir, filename)
#   ggsave(full_path, plots_act, width = 8.5, height = 11, units = "in")
#   # print(final_plot)

```