

Core Questions

```
##           x freq
## 1 Every 1-2 hours 169
## 2 Every 3-4 hours 160
## 3      Every hour   33
## 4          Other    28
```

```
# for (i in 1:nrow(Core_Questions)) {
# #####-----Research Style-----#####
#   if (Core_Questions$R_Style[i] == "Hands-off") {
#     Core_Questions$R_Style[i] = "Hands-off"
#   } else if (Core_Questions$R_Style[i] == "") {
#     Core_Questions$R_Style[i] = NA
#   } else{
#     Core_Questions$R_Style[i] = "Hands-on"
#   }
#
# #####-----Typical Week working Hours-----#####
#
#   if (Core_Questions$NP[i] == "1-2") {
#     Core_Questions$NP[i] = "NP1"
#   } else if (Core_Questions$NP[i] == "3-4") {
#     Core_Questions$NP[i] = "NP2"
#   } else if (Core_Questions$NP[i] == "5-6") {
#     Core_Questions$NP[i] = "NP3"
#   } else if (Core_Questions$NP[i] == "7-9") {
#     Core_Questions$NP[i] = "NP3"
#   } else if (Core_Questions$NP[i] == "") {
#     Core_Questions$NP[i] = NA
#   } else {
#     Core_Questions$NP[i] = "NP3"
#   }
#
#
#
#   if (Core_Questions$T[i] == "Minutes before deadline") {
#     Core_Questions$T[i] = "T1"
#   } else if (Core_Questions$T[i] == "1-3 hours before deadline") {
#     Core_Questions$T[i] = "T1"
#   } else if (Core_Questions$T[i] == "3-6 hours before deadline") {
#     Core_Questions$T[i] = "T1"
#   } else if (Core_Questions$T[i] == "1 day before deadline") {
#     Core_Questions$T[i] = "T2"
#   } else if (Core_Questions$T[i] == "") {
#     Core_Questions$T[i] = NA
#   } else {
#     Core_Questions$T[i] = "T2"
#   }
#
#
#}
```

```

#   if (Core_Questions$DS[i] == "Extremely less") {
#     Core_Questions$DS[i] = "DS1"
#   } else if (Core_Questions$DS[i] == "Significantly less") {
#     # Core_Questions$DS[i]=2
#     Core_Questions$DS[i] = "DS1"
#   } else if (Core_Questions$DS[i] == "Same") {
#     # Core_Questions$DS[i]=3
#     Core_Questions$DS[i] = "DS1"
#   } else if (Core_Questions$DS[i] == "Significantly more") {
#     # Core_Questions$DS[i]=4
#     Core_Questions$DS[i] = "DS2"
#   } else if (Core_Questions$DS[i] == "Extremely more") {
#     # Core_Questions$DS[i]=5
#     Core_Questions$DS[i] = "DS2"
#   } else {
#     Core_Questions$DS[i] = NA
#   }
#
#   if (Core_Questions$FA[i]=="NSF"){
#     Core_Questions$FA[i]="NSF"
#   } else if (Core_Questions$FA[i]=="NIH"){
#     Core_Questions$FA[i]="NIH"
#   } else if (Core_Questions$FA[i]=="DOE"){
#     Core_Questions$FA[i]="DOE"
#   } else if (Core_Questions$FA[i]=="DOD"){
#     Core_Questions$FA[i]="DOD"
#   } else if (Core_Questions$FA[i]=="NASA"){
#     Core_Questions$FA[i]="NASA"
#   } else if (Core_Questions$FA[i]==""){
#     Core_Questions$FA[i]=NA
#   } else{
#     Core_Questions$FA[i]="Other"
#   }
# }

```

```
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$RS))

## [1] "RS1" "RS2"

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] "Yes"

levels(factor(Core_Questions$NP))

## [1] "NP1" "NP2" "NP3"

levels(factor(Core_Questions$FA))

## [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" "2-4 weeks"

```

```

levels(factor(Core_Questions$L_Of_SR))

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

levels(factor(Core_Questions$W_WB_PD))

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

levels(factor(Core_Questions$T))

## [1] "T1" "T2"

levels(factor(Core_Questions$DS))

## [1] "DS1" "DS2"

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$FA)
```

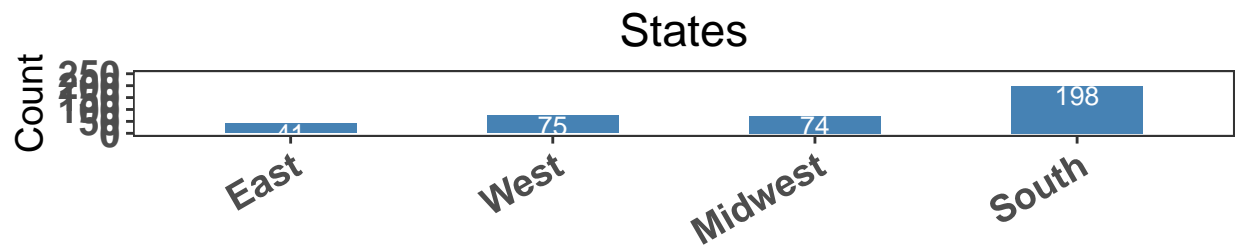
```
# #####Test a single core questions
# temp <- count(Core_Questions$Workload_today)
# colnames(temp) <- c("item", "count")
# temp <- temp[!(temp$item == ""),]
#
# bar_plot <- ggplot(data = temp, aes(x = item, y = count)) +
#   geom_bar(stat = "identity",
#     width = 0.5,
#     fill = "steelblue") +
#   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
```

Raw version

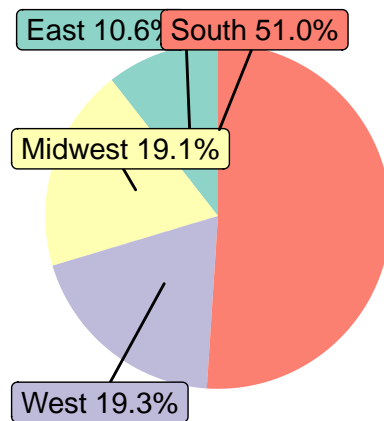
```
## [1] "state_do_you_reside"
```

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

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

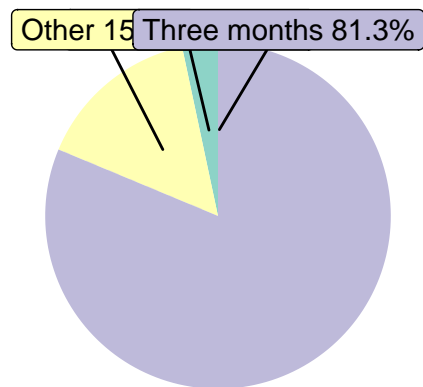


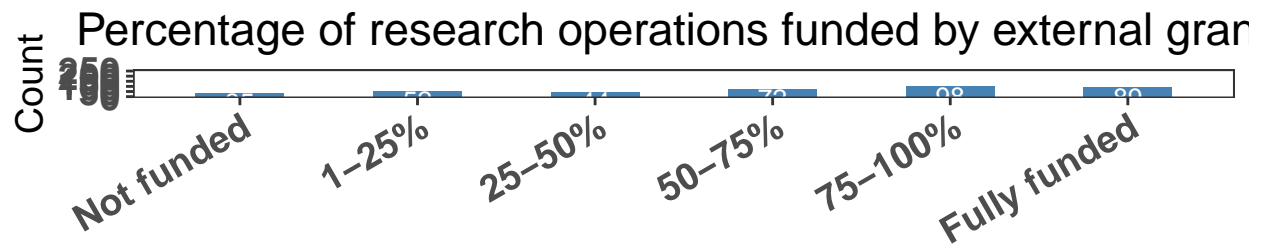
95% CI East(7.82, 13.99) Midwest(15.37, 23.19) South(45.79, 55)
West(15.60, 23.47)



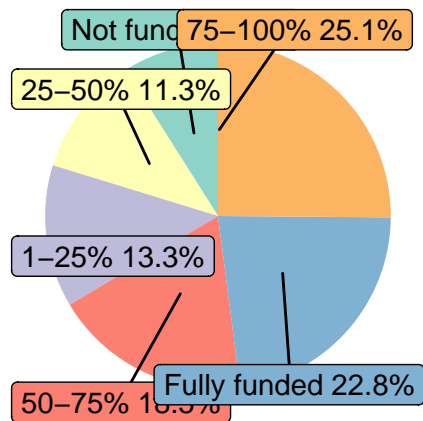


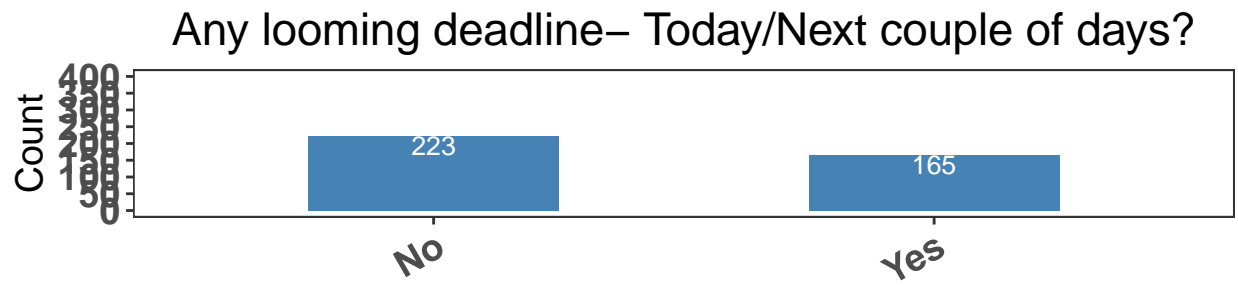
% CI Other(12.12, 19.33) Three months(77.08, 84.86) Two months(1



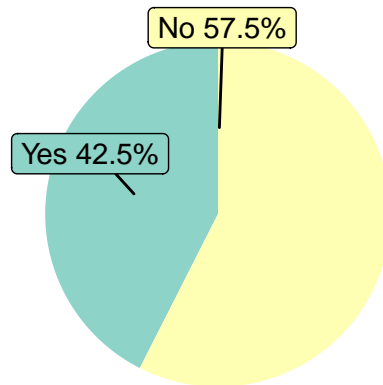


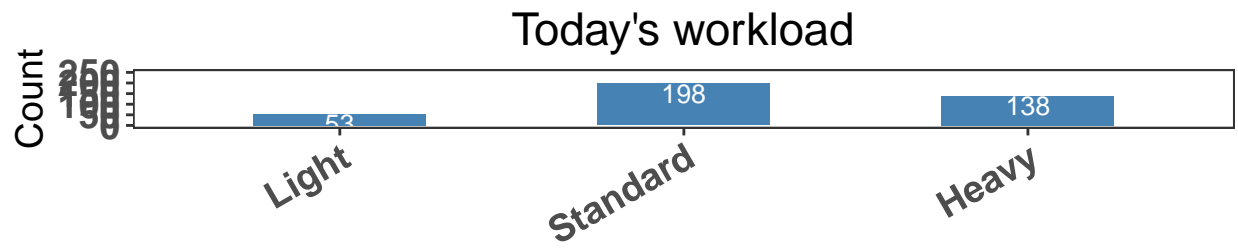
95% CI 1-25%(10.29, 17.10) 25-50%(8.49, 14.84) 50-75%(14.90, 21.06)
 5-100%(21.06, 29.69) Fully funded(18.91, 27.27) Not funded(6.50, 10.29)



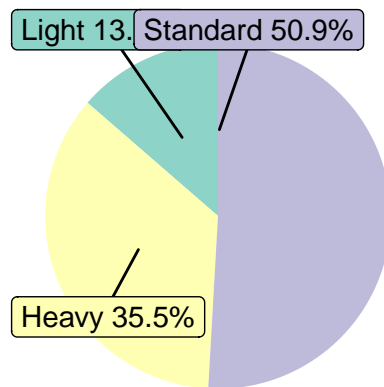


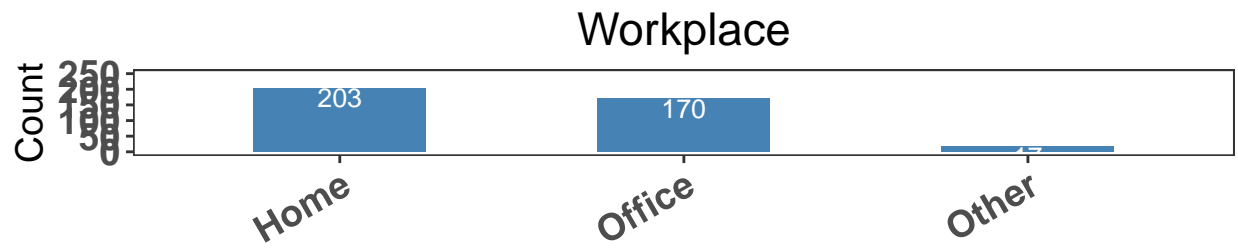
95% CI No(52.19, 62.03) Yes(37.47, 47.29)



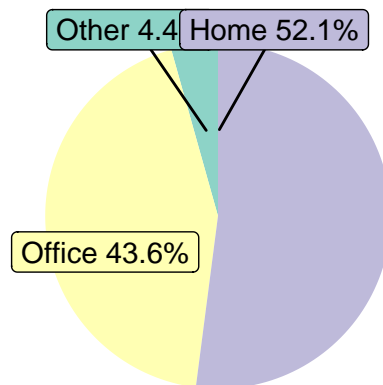


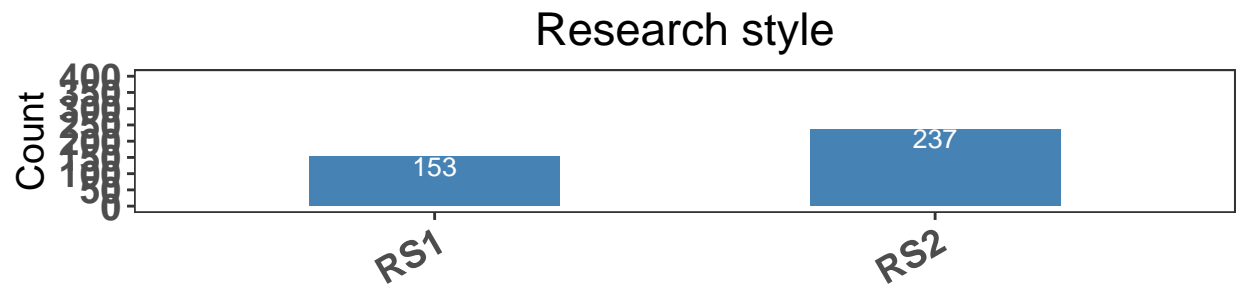
95% CI Heavy(30.78, 40.28) Light(10.52, 17.38) Standard(45.79, 5



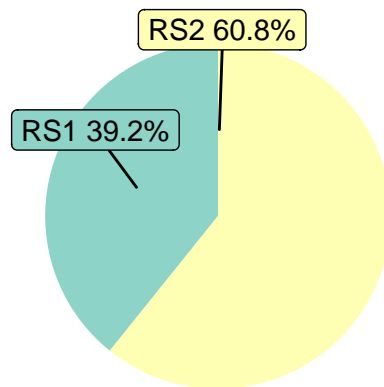


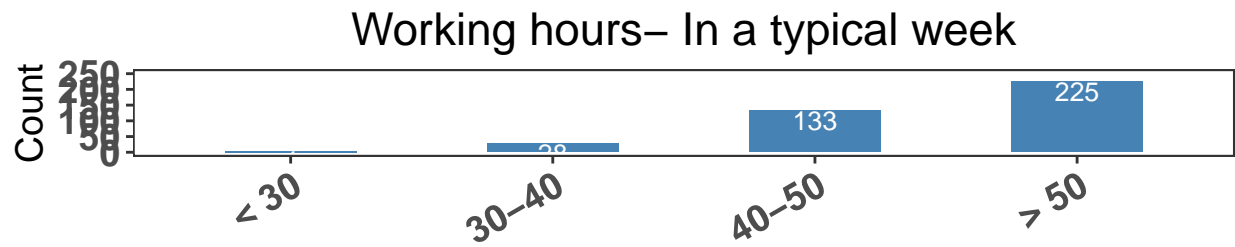
95% CI Home(47.07, 56.99) Office(38.73, 48.58) Other(2.72, 6.1)



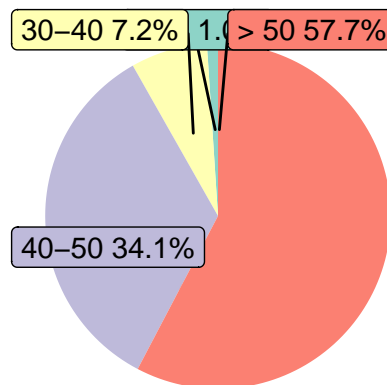


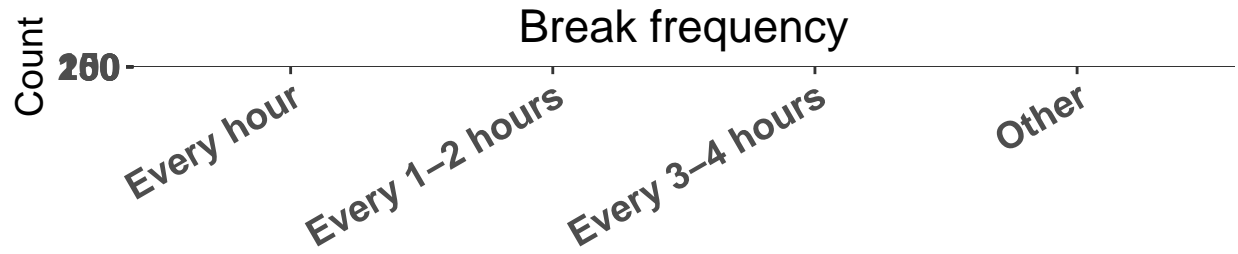
95% CI RS1(34.48, 44.19) RS2(55.81, 65.52)



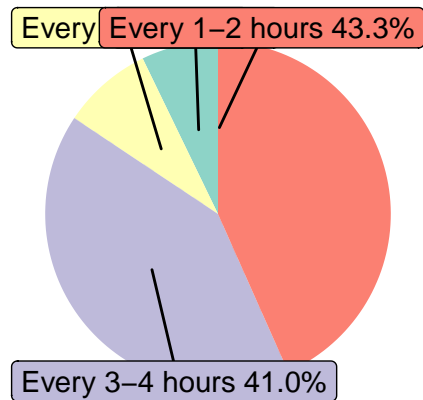


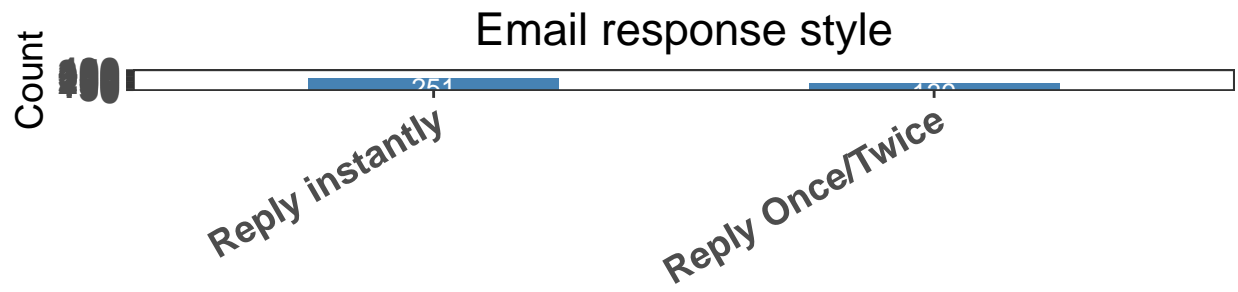
95% CI < 30(0.38, 2.71) > 50(52.71, 62.53) 30-40(4.99, 10.21)
 40-50(29.55, 38.97)



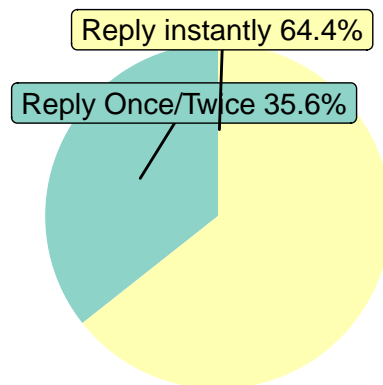


Every 1-2 hours(38.48, 48.32) Every 3-4 hours(36.23, 46.00) Every h
 Other(4.99, 10.22)

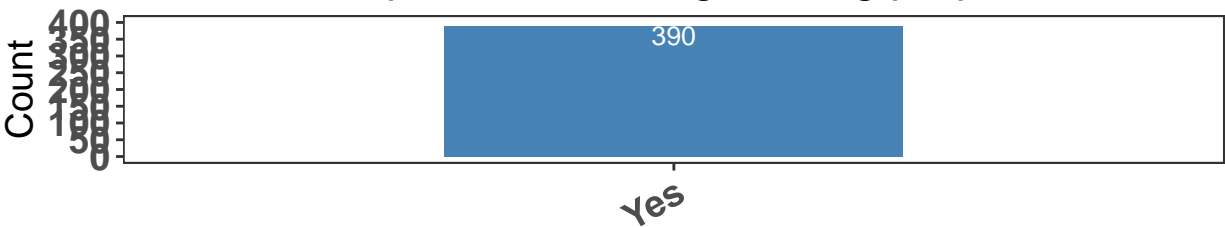




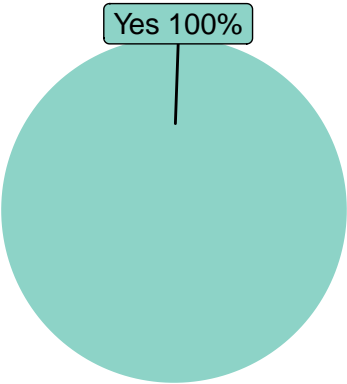
95% CI Reply instantly(59.46, 68.98) Reply Once/Twice(31.02, 40.54)

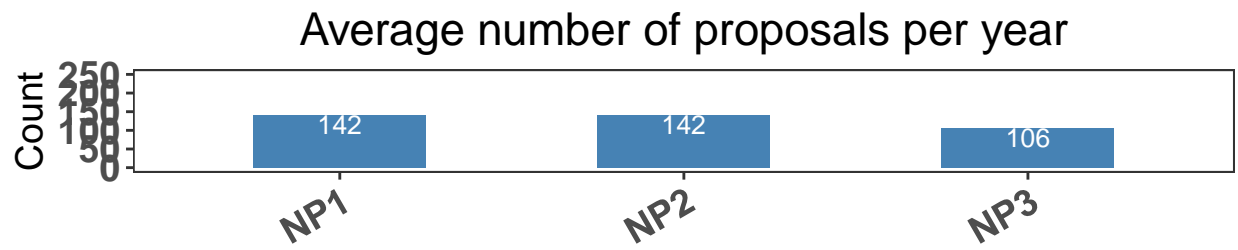


Participants submitting funding proposals

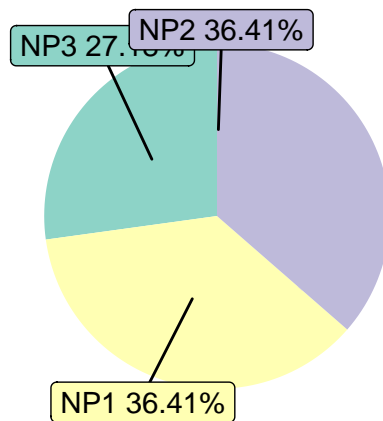


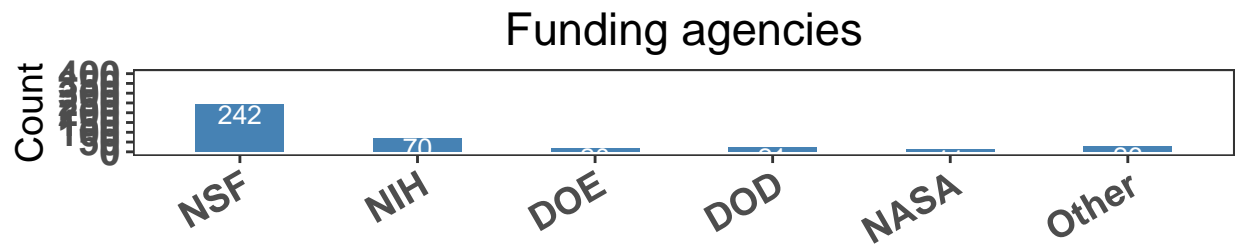
95% CI NA(NA, NA) (,)



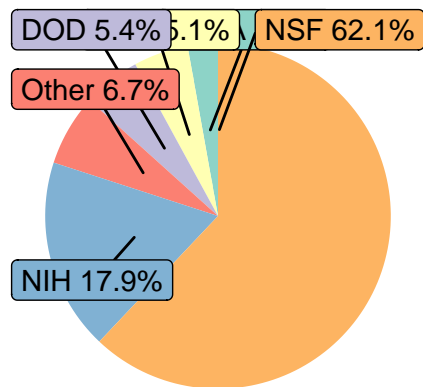


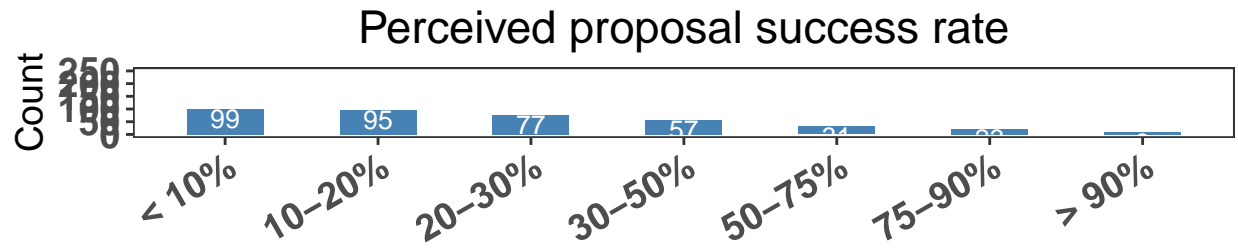
95% CI NP1(31.76, 41.33) NP2(31.76, 41.33) NP3(22.98, 31.83)



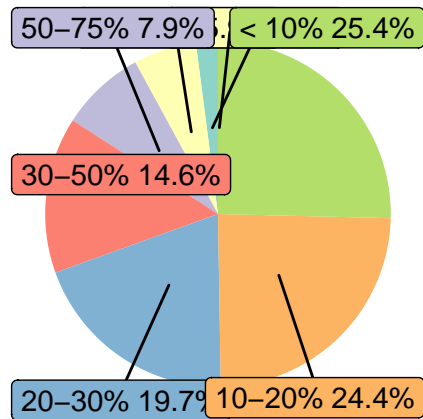


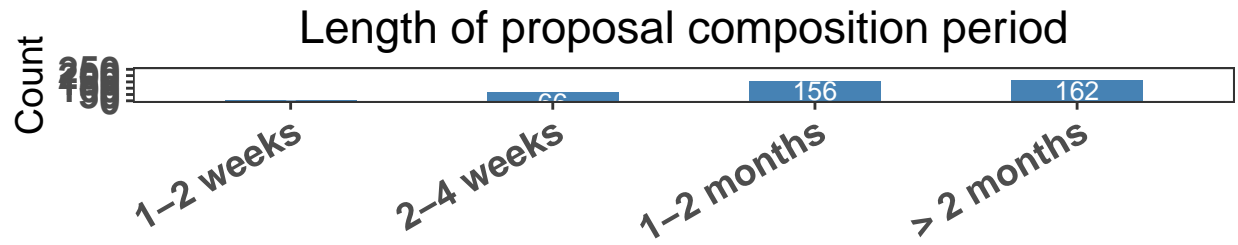
95% CI DOD(3.53, 8.13) DOE(3.33, 7.83) NASA(1.56, 5.03)
 NIH(14.44, 22.10) NSF(57.11, 66.76) Other(4.57, 9.63)



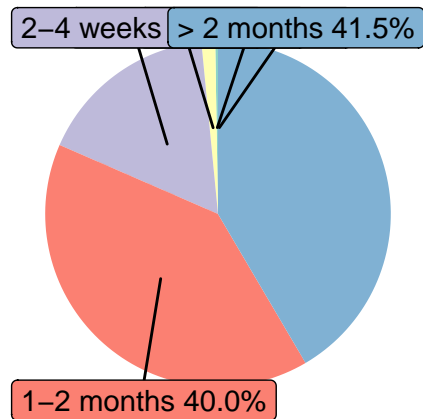


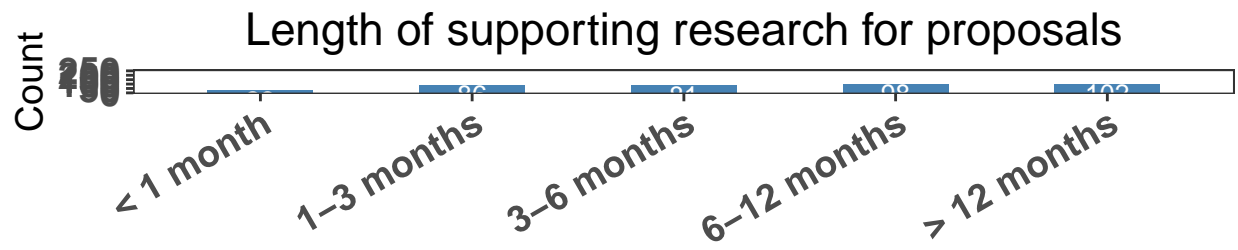
95% CI < 10%(21.29, 29.96) > 90%(1.03, 4.06) 10-20%(20.34, 24.01) 30-50%(11.43, 18.50) 50-75%(5.64, 11.10) 75-90%(1.03, 4.06)



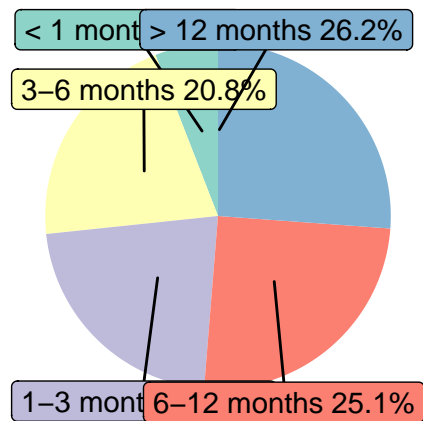


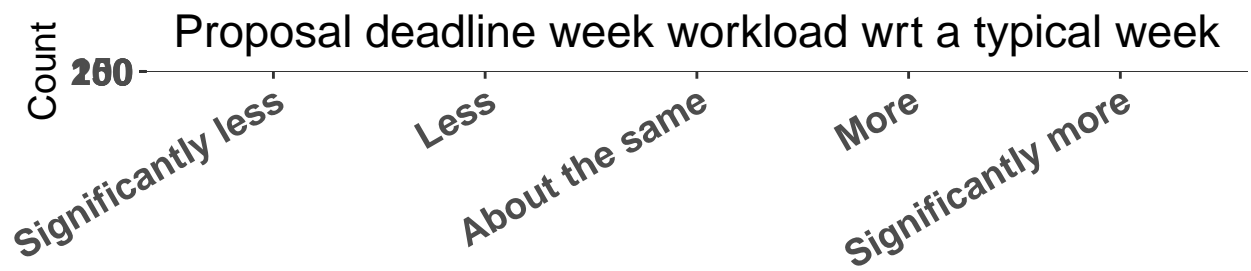
% CI < 1 week(0.04, 1.81) > 2 months(36.72, 46.52) 1-2 months(35.13, 46.52)
 1-2 weeks(0.53, 3.05) 2-4 weeks(13.51, 20.99)



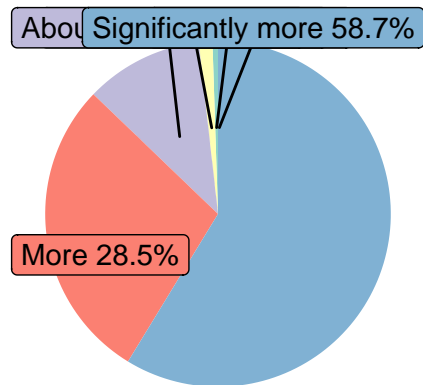


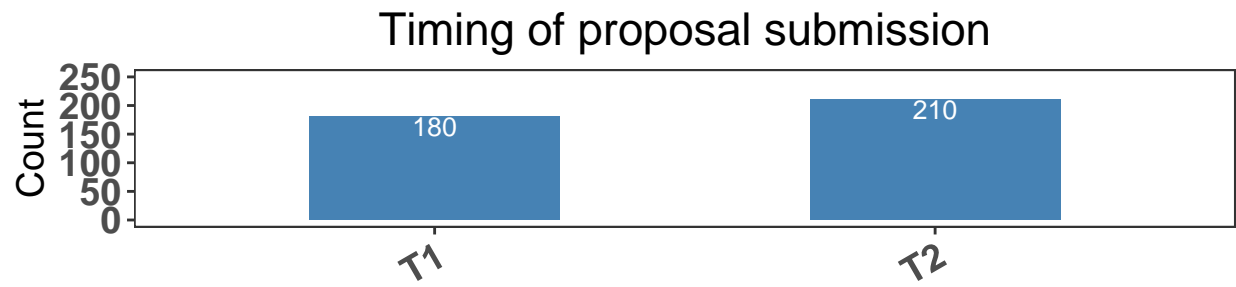
5 CI < 1 month(3.94, 8.73) > 12 months(22.01, 30.76) 1-3 months(18.01, 25.10)
 3-6 months(17.01, 25.10) 6-12 months(21.06, 29.69)



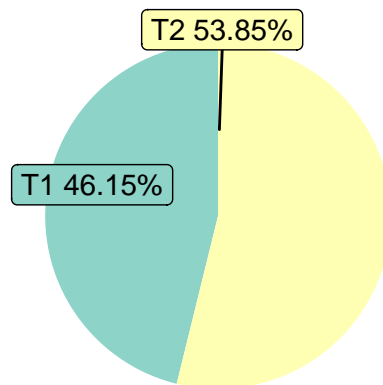


95% CI About the same(8.27, 14.56) Less(0.13, 2.04) More(24.18, 63.52)
 Significantly less(0.53, 3.05) Significantly more(53.74, 63.52)

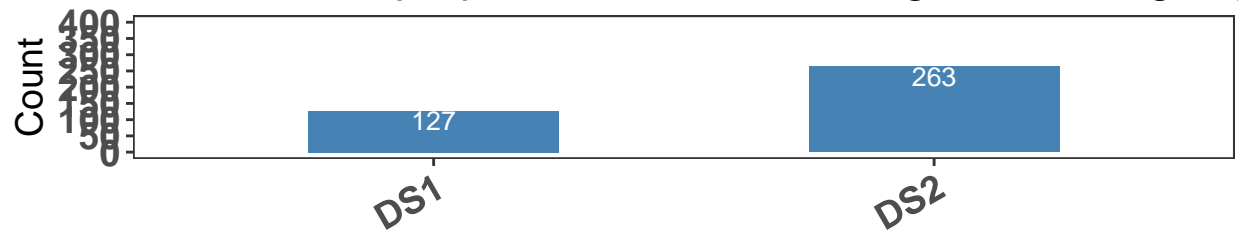




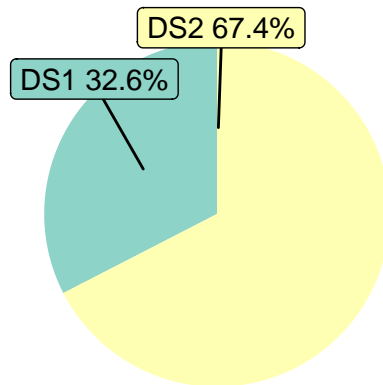
95% CI T1(41.24, 51.15) T2(48.85, 58.76)

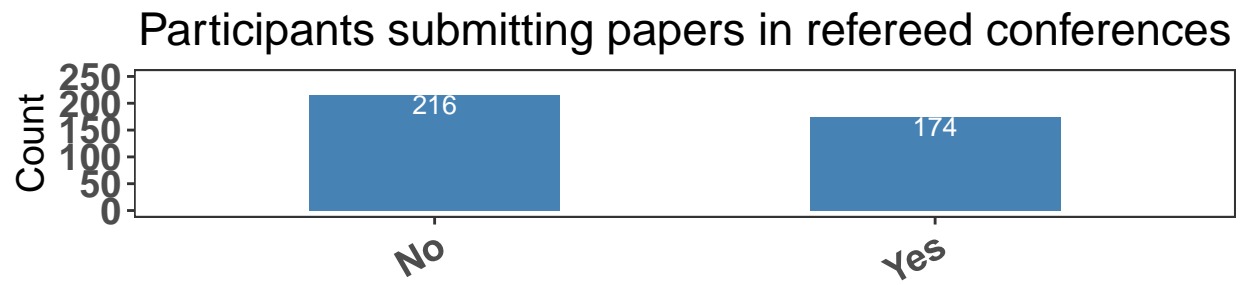


Stress level on proposal deadlines wrt regular working day

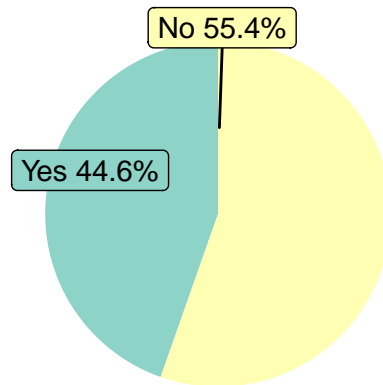


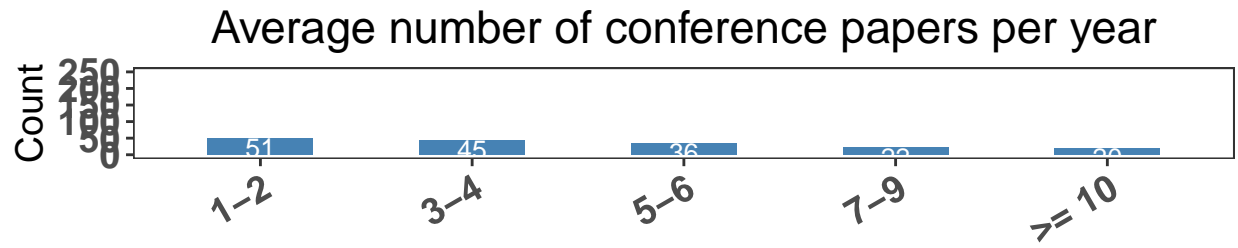
95% CI DS1(28.08, 37.40) DS2(62.60, 71.92)



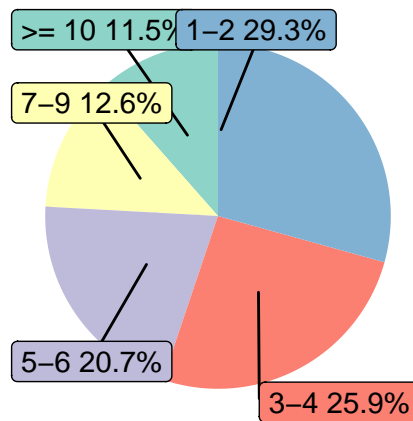


95% CI No(50.39, 60.27) Yes(39.73, 49.61)

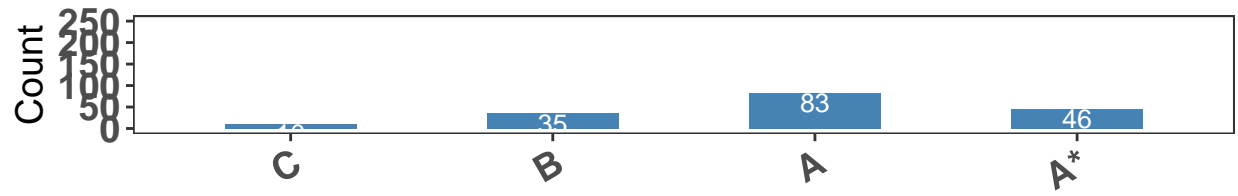




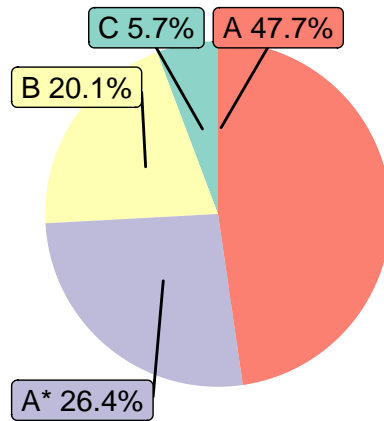
95% CI ≥ 10 (3.33, 7.83) 1-2 (10.07, 16.82) 3-4 (8.72, 15.12)
 5-6 (6.72, 12.55) 7-9 (3.74, 8.43)

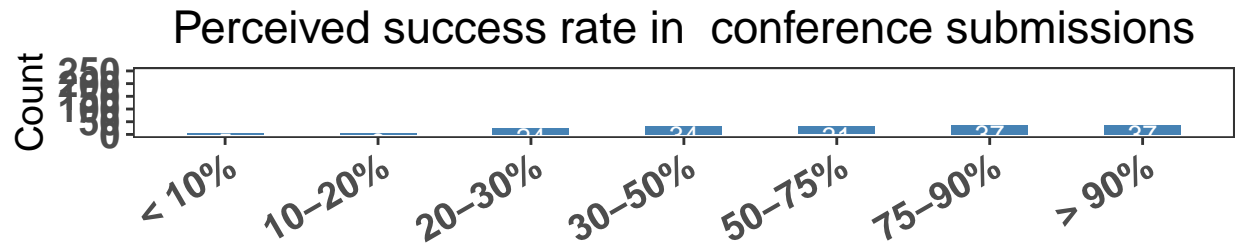


CORE rank of conferences

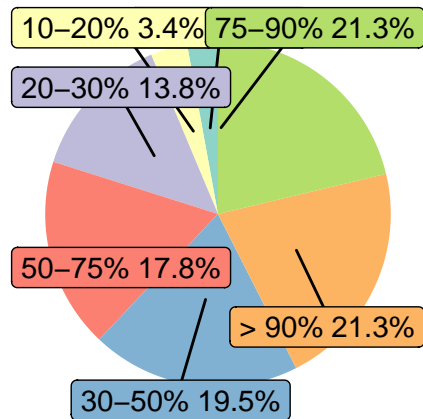


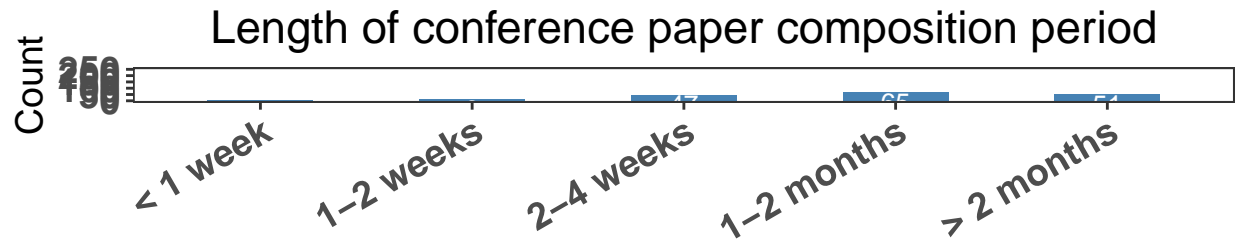
95% CI A(17.49, 25.65) A*(8.94, 15.41) B(6.50, 12.26)
C(1.38, 4.71)



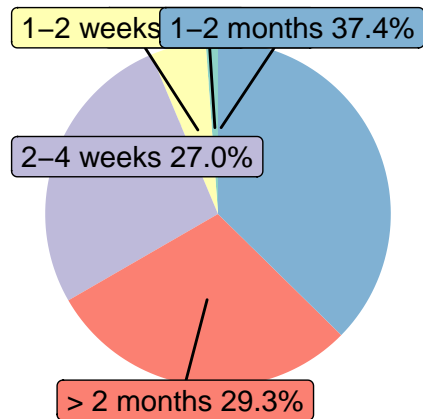


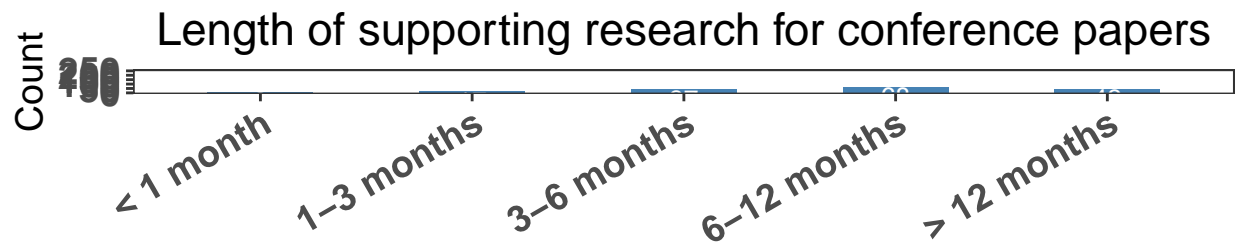
95% CI < 10%(0.53, 3.05) > 90%(6.94, 12.84) 10-20%(0.69, 3.15)
 (4.15, 9.03) 30-50%(6.29, 11.97) 50-75%(5.64, 11.10) 75-90%(6.29, 11.97)



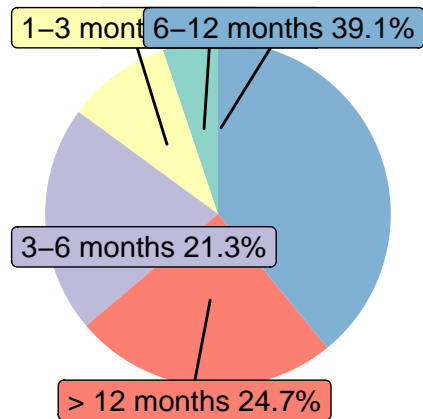


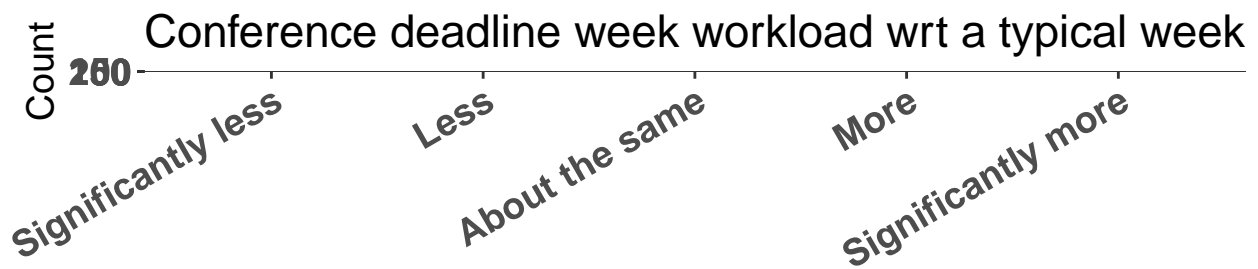
% CI < 1 week(0.13, 2.04) > 2 months(10.07, 16.82) 1-2 months(13.16, 20.91)
 1-2 weeks(1.20, 4.39) 2-4 weeks(9.16, 15.69)



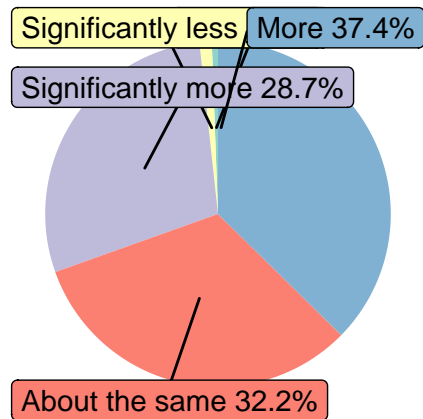


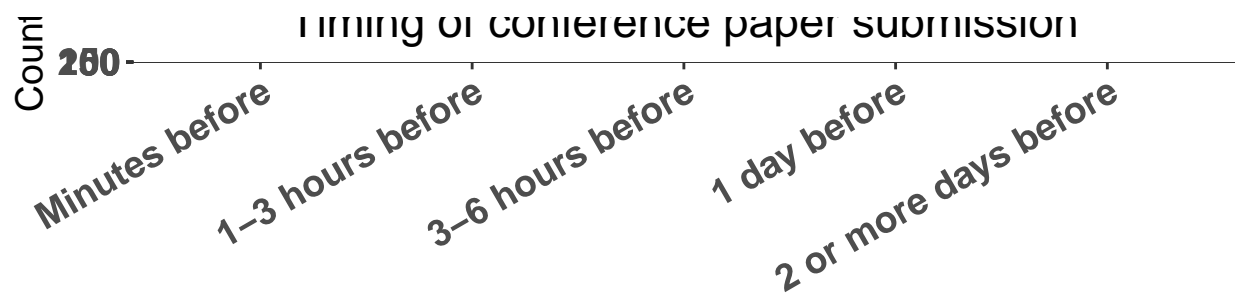
% CI < 1 month(1.20, 4.39) > 12 months(8.27, 14.56) 1-3 months(2.39, 4.39)
 3-6 months(6.94, 12.84) 6-12 months(13.97, 21.55)



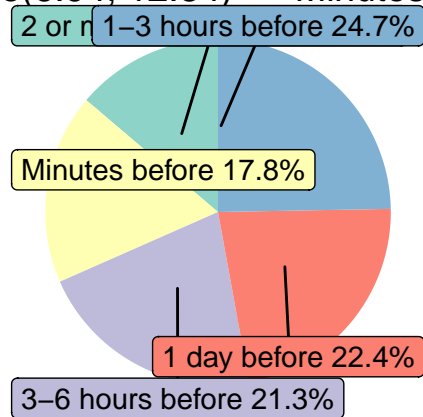


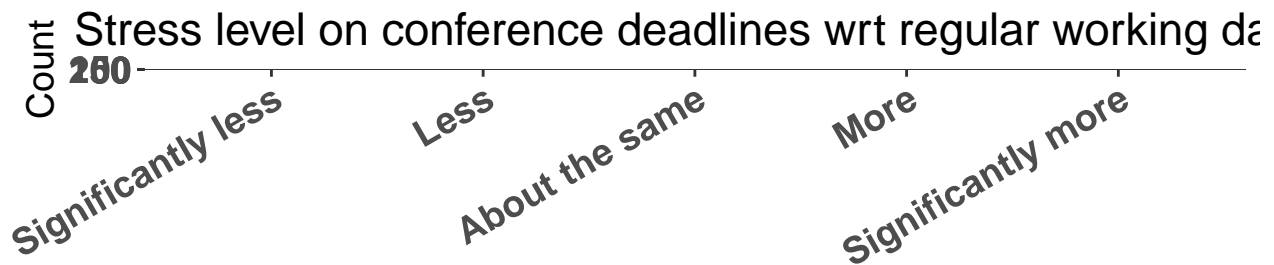
95% CI About the same(11.20, 18.22) Less(0.04, 1.81) More(13.27, 16.54),
Significantly less(0.13, 2.04) Significantly more(9.84, 16.54)



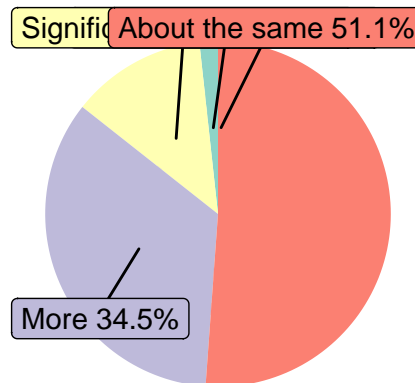


3 hours before(8.27, 14.56) 1 day before(7.38, 13.41) 2 or more days
 3-6 hours before(6.94, 12.84) Minutes before(5.64, 11.10)





CI About the same(18.91, 27.27) More(12.12, 19.33) Significantly less
Significantly more(3.74, 8.43)



```
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)

```