Amanda_MSc_RCodes

Amanda

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#Important please read: The R codes within this document are for my (Amanda Yee) Master of Science thesis at McGill University. Although the codes are being made publicly available for the purpose of transparency and reproducibility, my thesis committee and I would like to:

1. Provide the APA citation to my thesis: Yee, A. (2023). [Master of Science Thesis, McGill University]. ProQuest Dissertations Publishing.
2. Make reference to the default random forest codes that were used in my analysis: Liaw, A., & Wiener, M. (2022). *Package 'randomForest'* (pp. 1–29). https://cran.r-project.org/web/packages/randomForest/randomForest.pdf (https://cran.r-project.org/web/packages/randomForest/randomForest.pdf)

#Reading data

```
LegerData<-read.csv("C:/Users/Amanda Yee/Documents/School/McGill/McGill_Master/McGill_MSc_Thesis/McGill_MSc Thesis_Data Analysis/Leger_CompleteData_201/Leger_SurveyData_201_secured/Leger_SurveyData_201_text_csv UTF.csv", encoding="UTF-8", header = T)
```

#Checking if it is a data frame

```
is.data.frame(LegerData)
```

```
## [1] TRUE
```

#Selecting the demographic/care giving/AI-related variables & constructs

```
Demog<-c("QLANG", "Q3", "Q4", "Q5", "Q5r96oe", "Q6", "Q6r96oe", "Q7",
         "Q8r1","Q8r2", "Q8r3", "Q8r4", "Q8r5", "Q8r96", "Q8r96oe",
         "Q9r1", "Q9r2", "Q9r3", "Q9r96", "Q9r96oe",
         "Q10", "Q11", "Q12",
         "Q13r1","Q13r2","Q13r3", "Q13r4", "Q13r5", "Q13r6", "Q13r7","Q13r96","Q13r96oe",
         "UsedAI", "PastExAIr1","PastExAIr2", "PastExAIr3", "PastExAIr96", "PastExAIr96oe", "AIKnowledge",
         "PEr1","PEr2","PEr3","PEr4","PEr5","PEr6",
         "EEr1","EEr2","EEr3","EEr4","EEr5",
         "SIr1","SIr2","SIr3",
         "FCr1","FCr2",
         "TAr1","TAr2","TAr3","TAr4",
         "PTr1", "PTr2","PTr3",
         "PCr1", "PCr2",
         "EAr1", "EAr2", "EAr3", "EAr4",
         "BIr1", "BIr2", "BIr3")
```

#Creating the data frame using those selected variables and constructs

```
LegerData.vari<-LegerData[Demog]
```

#Creating a new data frame with the renamed variables

```
names(LegerData.vari)
```

```
##  [1] "QLANG"         "Q3"            "Q4"            "Q5"
##  [5] "Q5r96oe"       "Q6"            "Q6r96oe"       "Q7"
##  [9] "Q8r1"          "Q8r2"          "Q8r3"          "Q8r4"
## [13] "Q8r5"          "Q8r96"         "Q8r96oe"       "Q9r1"
## [17] "Q9r2"          "Q9r3"          "Q9r96"         "Q9r96oe"
## [21] "Q10"           "Q11"           "Q12"           "Q13r1"
## [25] "Q13r2"         "Q13r3"         "Q13r4"         "Q13r5"
## [29] "Q13r6"         "Q13r7"         "Q13r96"        "Q13r96oe"
## [33] "UsedAI"        "PastExAIr1"    "PastExAIr2"    "PastExAIr3"
## [37] "PastExAIr96"   "PastExAIr96oe" "AIKnowledge"   "PEr1"
## [41] "PEr2"          "PEr3"          "PEr4"          "PEr5"
## [45] "PEr6"          "EEr1"          "EEr2"          "EEr3"
## [49] "EEr4"          "EEr5"          "SIr1"          "SIr2"
## [53] "SIr3"          "FCr1"          "FCr2"          "TAr1"
## [57] "TAr2"          "TAr3"          "TAr4"          "PTr1"
## [61] "PTr2"          "PTr3"          "PCr1"          "PCr2"
## [65] "EAr1"          "EAr2"          "EAr3"          "EAr4"
## [69] "BIr1"          "BIr2"          "BIr3"
```

```
library(dplyr)
```

```
##
## Attaching package: 'dplyr'
```

```
## The following objects are masked from 'package:stats':
##
##     filter, lag
```

```
## The following objects are masked from 'package:base':
##
##     intersect, setdiff, setequal, union
```

```
LG.vari.renamed<-rename(LegerData.vari,
                            "Survey's Language" = "QLANG",
                            "Age" = "Q3",
                            "Gender" = "Q4",
                            "Education" = "Q5",
                            "Responses to Education" = "Q5r96oe",
                            "Employment" = "Q6",
                            "Responses to Employment" = "Q6r96oe",
                            "Years Lived in Canada" = "Q7",
                            "Relationship to care recipient - child" = "Q8r1",
                            "Relationship to care recipient - grandchild" = "Q8r2",
                            "Relationship to care recipient - spouse" = "Q8r3",
                            "Relationship to care recipient - sibiling" = "Q8r4",
                            "Relationship to care recipient - friend" = "Q8r5",
                            "Relationship to care recipient - other" = "Q8r96",
                            "Responses to relationship to care recipient" = "Q8r96oe",
                            "Living arrangement - living with the family caregiver" = "Q9r1",
                            "Living arrangement - living independently in one's own home" = "Q9r2",
                            "Living arrangement - living in long-term care/nursing home/residential home" = "Q9r3",
                            "Living arrangement - other" = "Q9r96",
                            "Responses to living arrangement" ="Q9r96oe",
                            "Number of older adults the family caregiver is caring for" = "Q10",
                            "Number of years the family caregiver has been a caregiver" = "Q11",
                            "Estimated number of hours of care per week provided by the family caregiver" = "Q12",
                            "Tasks family caregivers perform - Medical/nursing care" = "Q13r1",
                            "Tasks family caregivers perform - Care coordinator" = "Q13r2",
                            "Tasks family caregivers perform - Psychosocial care" = "Q13r3",
                            "Tasks family caregivers perform - Daily living activities" = "Q13r4",
                            "Tasks family caregivers perform - Household tasks" = "Q13r5",
                            "Tasks family caregivers perform - Transportation" = "Q13r6",
                            "Tasks family caregivers perform - Substitute decision-maker" = "Q13r7",
                            "Tasks family caregivers perform - Other" = "Q13r96",
                            "Responses to the tasks family caregivers perform" = "Q13r96oe",
                            "Family caregivers past AI experience" = "UsedAI",
                            "AI technology family caregivers have used before - AI-based wearable devices" = "PastExAIr1",
                            "AI technology family caregivers have used before - AI-based assistive technology" = "PastExAIr
2",
                            "AI technology family caregivers have used before - AI-based chatbots/virtual assistants" = "Pa
stExAIr3",
                            "AI technology family caregivers have used before - Other" = "PastExAIr96",
                            "Responses to AI technology family caregivers have used before" = "PastExAIr96oe",
                            "Family caregivers’ knowledge about AI" = "AIKnowledge")
```

#SURVEY’S LANGUAGE

##Converting from character into factor

```
LG.vari.renamed$`Survey's Language`<-factor(LG.vari.renamed$`Survey's Language`, levels=c("Français / French", "English / An
glais"))
```

#GENDER

##Converting from character into factor

```
LG.vari.renamed$Gender<-factor(LG.vari.renamed$Gender,levels=c("Woman", "Man"))
```

#EDUCATION

##Converting from character into factor

```
LG.vari.renamed$Education<-factor(LG.vari.renamed$Education, levels=c("Elementary", "High school", "College / CEGEP", "Under
graduate", "Post-graduate (e.g., Masters, Ph.D.)","Other, please specify"))
LG.vari.renamed$`Responses to Education`<-factor(LG.vari.renamed$`Responses to Education`)
```

#EMPLOYMENT

##Converting from character into factor

##A new level for employment (“full-time caregiver”) was created for participants who put a text response related to being a caregiver. As a result, some participants text responses were re-coded into the newly created level.

```
LG.vari.renamed$Employment<-factor(LG.vari.renamed$Employment,levels=c("Full-time","Part-time","Unemployed", "Retired", "Ful
l-time caregiver","Other, please specify"))
LG.vari.renamed$`Responses to Employment`<-factor(LG.vari.renamed$`Responses to Employment`)
LG.vari.renamed$Employment[which(LG.vari.renamed$Employment=="Other, please specify"&LG.vari.renamed$`Responses to Employmen
t`%in%c("aidant naturel à temps plein", "Aidant Naturel"))]<- "Full-time caregiver"
```

##Some participants’ text response was re-coded as ‘unemployed’

```
LG.vari.renamed$Employment[which(LG.vari.renamed$Employment=="Other, please specify"&LG.vari.renamed$`Responses to Employmen
t`%in%c("Invalide", "Retour aux études"))]<- "Unemployed"
```

##Among the text responses that were re-coded, we removed their text responses from the 'response' column

```
LG.vari.renamed$`Responses to Employment`[which(LG.vari.renamed$`Responses to Employment`%in%c("aidant naturel à temps plei
n", "Aidant Naturel","Invalide", "Retour aux études"))]<- ""
```

#RELATIONSHIP to the care recipient

##Converting from character into factor

```
LG.vari.renamed$`Relationship to care recipient - child`<-factor(LG.vari.renamed$`Relationship to care recipient - child`, l
evels=c("Child", "NO TO: Child"))
LG.vari.renamed$`Relationship to care recipient - grandchild`<-factor(LG.vari.renamed$`Relationship to care recipient - gran
dchild`, levels=c("Grandchild","NO TO: Grandchild"))
LG.vari.renamed$`Relationship to care recipient - spouse`<- factor(LG.vari.renamed$`Relationship to care recipient - spouse
`, levels = c("Spouse", "NO TO: Spouse"))
LG.vari.renamed$`Relationship to care recipient - sibiling`<- factor(LG.vari.renamed$`Relationship to care recipient - sibil
ing`,levels =c("Sibling","NO TO: Sibling"))
LG.vari.renamed$`Relationship to care recipient - friend`<- factor (LG.vari.renamed$`Relationship to care recipient - friend
`,levels=c("Friend", "NO TO: Friend"))
LG.vari.renamed$`Relationship to care recipient - other`<-factor (LG.vari.renamed$`Relationship to care recipient - other`,l
evels=c("Other, please specify", "NO TO: Other, please specify"))
LG.vari.renamed$`Responses to relationship to care recipient`<-factor(LG.vari.renamed$`Responses to relationship to care rec
ipient`)
```

##Some participant's text response related to them caring for their parents/mother/father and the equivalent terms in French was re-coded from 'other, please specify' to 'child' as the participant are the child to their mother/father, who is the care recipient. Then, those participants' 'other, please specify' responses will not be applicable, so it was re-coded to reflect 'NO TO: Other, please specify'

```
LG.vari.renamed$`Relationship to care recipient - child`[which(LG.vari.renamed$`Relationship to care recipient - other`=="Ot
her, please specify"&
                                                          LG.vari.renamed$`Responses to relationship to care recipien
t`%in%c("father", "ma mere", "mere", "Mere", "mère", "Mère", "mother", "Mother",

"parent", "Parent", "parents", "Parents", "Parents Père et Mere",

"pere", "Pere", "père", "Père"))]<-"Child"
LG.vari.renamed$`Relationship to care recipient - other`[which(LG.vari.renamed$`Relationship to care recipient - other`=="Ot
her, please specify"&
                                                          LG.vari.renamed$`Responses to relationship to care recipien
t`%in%c("father", "ma mere", "mere", "Mere", "mère", "Mère", "mother", "Mother",

"parent", "Parent", "parents", "Parents", "Parents Père et Mere",

"pere", "Pere", "père", "Père"))]<-"NO TO: Other, please specify"
```

##One participant's text response was re-coded to the response option of 'sibling'. Then,their 'other, please specify' response will not be applicable so it was re-coded to 'NO TO: Other, please specify'

```
LG.vari.renamed$`Relationship to care recipient - sibiling`[which(LG.vari.renamed$`Relationship to care recipient - other`=
="Other, please specify"&
                                                           LG.vari.renamed$`Responses to relationship to care recipie
nt`%in%c("brother"))]<-"Sibling"
LG.vari.renamed$`Relationship to care recipient - other`[which(LG.vari.renamed$`Relationship to care recipient - other`=="Ot
her, please specify"&
                                                        LG.vari.renamed$`Responses to relationship to care recipient
`%in%c("brother"))]<-"NO TO: Other, please specify"
```

##One participant's text response was re-coded to the response option of 'grandchild'. Then their 'other, please specify' response will not be applicable so it was re-coded to 'NO TO: Other, please specify'

```
LG.vari.renamed$`Relationship to care recipient - grandchild`[which(LG.vari.renamed$`Relationship to care recipient - other`
=="Other, please specify"&
                                                             LG.vari.renamed$`Responses to relationship to care recip
ient`%in%c("grand mère"))]<-"Grandchild"

LG.vari.renamed$`Relationship to care recipient - other`[which(LG.vari.renamed$`Relationship to care recipient - other`=="Ot
her, please specify"&
                                                        LG.vari.renamed$`Responses to relationship to care recipient
`%in%c("grand mère"))]<-"NO TO: Other, please specify"
```

#LIVING ARRANGEMENT of the care recipient

##Converting from character into factor

```
LG.vari.renamed$`Living arrangement - living with the family caregiver`<-factor(LG.vari.renamed$`Living arrangement - living with the family caregiver`
                                                                                ,levels=c("Living with the family caregive
r", "NO TO: Living with the family caregiver"))
LG.vari.renamed$`Living arrangement - living independently in one's own home`<-factor(LG.vari.renamed$`Living arrangement - living independently in one's own home`,
                                                                                      levels=c("Living independently in on
e's own home", "NO TO: Living independently in one's own home"))

LG.vari.renamed$`Living arrangement - living in long-term care/nursing home/residential home`<-factor(LG.vari.renamed$`Livin
g arrangement - living in long-term care/nursing home/residential home`,
                                                                                                  levels=c("Living in lo
ng-term care/nursing home/residential home", "NO TO: Living in long-term care/nursing home/residential home"))
LG.vari.renamed$`Living arrangement - other`<-factor(LG.vari.renamed$`Living arrangement - other`,levels=c("Other, please sp
ecify", "NO TO: Other, please specify"))

LG.vari.renamed$`Responses to living arrangement`<-factor(LG.vari.renamed$`Responses to living arrangement`)
```

##Some participants' text response was re-coded to the response option of 'living with the family caregiver'. Then,their 'other, please specify' responses will not be applicable so it was re-coded to 'NO TO: Other, please specify'.

```
LG.vari.renamed$`Living arrangement - living with the family caregiver`[which(LG.vari.renamed$`Living arrangement - other`=
="Other, please specify"&
                                                                             LG.vari.renamed$`Responses to living arrangeme
nt`%in%c("Living with another family member", "Elle vie avec sa soeur et moi je m'occupe d'elle aux besoin"))]<-"Living with
the family caregiver"
LG.vari.renamed$`Living arrangement - other`[which (LG.vari.renamed$`Living arrangement - other`=="Other, please specify"&
                                                    LG.vari.renamed$`Responses to living arrangement`%in%c("Living with anot
her family member", "Elle vie avec sa soeur et moi je m'occupe d'elle aux besoin"))]<-"NO TO: Other, please specify"
```

##One participant's text response can be re-coded to the response option of 'living independently in one's own home'. Then,their 'other, please specify' responses will not be applicable so it was re-coded to 'NO TO: Other, please specify'

```
LG.vari.renamed$`Living arrangement - living independently in one's own home`[which(LG.vari.renamed$`Living arrangement - ot
her`=="Other, please specify"&
                                                                                LG.vari.renamed$`Responses to living arr
angement`%in%c("Vit dans sa maison avec son mari"))]<-"Living independently in one's own home"

LG.vari.renamed$`Living arrangement - other`[which(LG.vari.renamed$`Living arrangement - other`=="Other, please specify"&
                                                     LG.vari.renamed$`Responses to living arrangement`%in%c("Vit dans sa mai
son avec son mari"))]<-"NO TO: Other, please specify"
```

#NUMBER OF OLDER ADULTS THE FAMILY CAREGIVER IS CARING FOR

##Converting from character into factor

```
LG.vari.renamed$`Number of older adults the family caregiver is caring for`<-factor(LG.vari.renamed$`Number of older adults
the family caregiver is caring for`,
                                                                                    levels=c("1", "2", "3", "4 or more"))
```

#TASKS FAMILY CAREGIVER PERFORMS

##Converting from character into factor

```
LG.vari.renamed$`Tasks family caregivers perform - Medical/nursing care`<-factor(LG.vari.renamed$`Tasks family caregivers perform - Medical/nursing care`,
                                                                                 levels=c("Medical/nursing care (e.g., operating medical equipment like a catheter, providing wound care, assisting with medications/injections)",
                                                                                          "NO TO: Medical/nursing care (e.g., operating medical equipment like a catheter, providing wound care, assisting with medications/injections)"))
LG.vari.renamed$`Tasks family caregivers perform - Care coordinator`<-factor(LG.vari.renamed$`Tasks family caregivers perform - Care coordinator`,
                                                                             levels=c("Care coordinator (e.g., communicate with healthcare providers, translator, schedule appointments)",
                                                                                      "NO TO: Care coordinator (e.g., communicate with healthcare providers, translator, schedule appointments)"))
LG.vari.renamed$`Tasks family caregivers perform - Psychosocial care`<-factor(LG.vari.renamed$`Tasks family caregivers perform - Psychosocial care`,
                                                                              levels=c("Psychosocial care (e.g., emotional support, companionship)","NO TO: Psychosocial care (e.g., emotional support, companionship)"))
LG.vari.renamed$`Tasks family caregivers perform - Daily living activities`<-factor(LG.vari.renamed$`Tasks family caregivers perform - Daily living activities`,
                                                                                    levels=c("Daily living activities (e.g., dressing, feeding, toileting, transferring)",
                                                                                             "NO TO: Daily living activities (e.g., dressing, feeding, toileting, transferring)"))
LG.vari.renamed$`Tasks family caregivers perform - Household tasks`<-factor(LG.vari.renamed$`Tasks family caregivers perform - Household tasks`,
                                                                            levels=c("Household tasks (e.g., home maintenance, grocery shopping, laundry)",
                                                                                     "NO TO: Household tasks (e.g., home maintenance, grocery shopping, laundry)"))
LG.vari.renamed$`Tasks family caregivers perform - Transportation`<-factor (LG.vari.renamed$`Tasks family caregivers perform - Transportation`,
                                                                            levels=c("Transportation (e.g., driving the older adult to appointments)",
                                                                                     "NO TO: Transportation (e.g., driving the older adult to appointments)"))
LG.vari.renamed$`Tasks family caregivers perform - Substitute decision-maker`<-factor(LG.vari.renamed$`Tasks family caregivers perform - Substitute decision-maker`,
                                                                                      levels=c("Substitute decision-maker (e.g., making health, legal and financial decisions on behalf of the older care recipient who is unable to)",
                                                                                               "NO TO: Substitute decision-maker (e.g., making health, legal and financial decisions on behalf of the older care recipient who is unable to)"))

LG.vari.renamed$`Tasks family caregivers perform - Other`<-factor(LG.vari.renamed$`Tasks family caregivers perform - Other`,
                                                                  levels=c("Other, please specify", "NO TO: Other, please specify"))
LG.vari.renamed$`Responses to the tasks family caregivers perform`<-factor(LG.vari.renamed$`Responses to the tasks family caregivers perform`)
```

##One participant's text response was re-coded to the response option of 'care coordinator (e.g., communicate with healthcare providers, translator, schedule appointments)'. Then,their 'other, please specify' response will not be applicable so it was re-coded to 'NO TO: Other, please specify'.

```
LG.vari.renamed$`Tasks family caregivers perform - Care coordinator`[which(LG.vari.renamed$`Tasks family caregivers perform - Other`=="Other, please specify"&
                                                                           LG.vari.renamed$`Responses to the tasks family caregivers perform`%in%c
                                                                           ("Moi vas son médecin avec elle et si besoin de quoi se soie moi téléphone pour elle"))]<-"Care coordinator (e.g., communicate with healthcare providers, translator, schedule appointments)"

LG.vari.renamed$`Tasks family caregivers perform - Other`[which(LG.vari.renamed$`Tasks family caregivers perform - Other`=="Other, please specify"&
                                                               LG.vari.renamed$`Responses to the tasks family caregivers perform`%in%c
                                                               ("Moi vas son médecin avec elle et si besoin de quoi se soie moi téléphone pour elle"))] <-"NO TO: Other, please specify"
```

##Some participants' text response was re-coded to the response option of 'daily living activities (e.g., dressing, feeding, toileting, transferring)'. Then,their 'other, please specify' responses will not be applicable so it was re-coded to 'NO TO: Other, please specify'.

```
LG.vari.renamed$`Tasks family caregivers perform - Daily living activities`[which(LG.vari.renamed$`Tasks family caregivers perform - Other`=="Other, please specify"&
                                                                                  LG.vari.renamed$`Responses to the tasks family caregivers perform`%in%c
                                                                                  ("ramasser de la merde et laver mettre des couches", "surveillance immédiate maison intergénérationelle"))]<- "Daily living activities (e.g., dressing, feeding, toileting, transferring)"

LG.vari.renamed$`Tasks family caregivers perform - Other`[which(LG.vari.renamed$`Tasks family caregivers perform - Other`=="Other, please specify"&
                                                               LG.vari.renamed$`Responses to the tasks family caregivers perform`%in%c
                                                               ("ramasser de la merde et laver mettre des couches", "surveillance immédiate maison intergénérationelle"))] <-"NO TO: Other, please specify"
```

##One participant's text response was re-coded to the response option of 'household tasks (e.g., home maintenance, grocery shopping, laundry)'. Then,their 'other, please specify' responses will not be applicable so it was re-coded to 'NO TO: Other, please specify'.

```
LG.vari.renamed$`Tasks family caregivers perform - Household tasks`[which(LG.vari.renamed$`Tasks family caregivers perform - Other`=="Other, please specify"&
                                                                          LG.vari.renamed$`Responses to the tasks family caregivers perform`%in%c("Épicerie"))]<- "Household tasks (e.g., home maintenance, grocery shopping, laundry)"

LG.vari.renamed$`Tasks family caregivers perform - Other`[which(LG.vari.renamed$`Tasks family caregivers perform - Other`=="Other, please specify"&
                                                                 LG.vari.renamed$`Responses to the tasks family caregivers perform`%in%c
                                                               ("Épicerie"))] <-"NO TO: Other, please specify"
```

##Among those text responses that were re-coded, we removed their text responses from the 'response' column

```
LG.vari.renamed$`Responses to the tasks family caregivers perform`[which(LG.vari.renamed$`Responses to the tasks family caregivers perform`%in%c("Moi vas son médecin avec elle et si besoin de quoi se soie moi téléphone pour elle",

"ramasser de la merde et laver mettre des couches", "surveillance immédiate maison intergénérationelle",

"Épicerie"))]<-""
```

#PAST AI EXPERIENCE

##Converting from character into factor

```
LG.vari.renamed$`Family caregivers past AI experience`<-factor(LG.vari.renamed$`Family caregivers past AI experience`, levels=c("Yes", "No"))
```

#AI TECH USED BEFORE

##Converting from character into factor

```
LG.vari.renamed$`AI technology family caregivers have used before - AI-based wearable devices`<-factor(LG.vari.renamed$`AI technology family caregivers have used before - AI-based wearable devices`,
                                                                                                        levels=c("AI-based wearable devices", "NO TO: AI-based wearable devices"))
LG.vari.renamed$`AI technology family caregivers have used before - AI-based assistive technology`<-factor(LG.vari.renamed$`AI technology family caregivers have used before - AI-based assistive technology`,
                                                                                                           level=c("AI-based assistive technology", "NO TO: AI-based assistive technology"))
LG.vari.renamed$`AI technology family caregivers have used before - AI-based chatbots/virtual assistants`<-factor(LG.vari.renamed$`AI technology family caregivers have used before - AI-based chatbots/virtual assistants`,
                                                                                                                 levels=c("AI-based chatbots/virtual assistants", "NO TO: AI-based chatbots/virtual assistants"))
LG.vari.renamed$`AI technology family caregivers have used before - Other`<-factor(LG.vari.renamed$`AI technology family caregivers have used before - Other`,
                                                                                   levels=c("Other, please specify", "NO TO: Other, please specify"))

LG.vari.renamed$`Responses to AI technology family caregivers have used before`<-factor(LG.vari.renamed$`Responses to AI technology family caregivers have used before`)
```

##One participant's text response was re-coded to the response option of 'AI-based wearable devices'. Then,their 'other, please specify' responses will not be applicable so it was re-coded to 'NO TO: Other, please specify'.

```
LG.vari.renamed$`AI technology family caregivers have used before - AI-based wearable devices`[which(LG.vari.renamed$`AI technology family caregivers have used before - Other`=="Other, please specify"&
                                                                                                    LG.vari.renamed$`Responses to AI technology family caregivers have used before`%in%c("Dexcom suivi diabète"))]<- "AI-based wearable devices"

LG.vari.renamed$`AI technology family caregivers have used before - Other`[which(LG.vari.renamed$`AI technology family careg
ivers have used before - Other`=="Other, please specify"&
                                                                                LG.vari.renamed$`Responses to AI technology
family caregivers have used before`%in%c("Dexcom suivi diabète"))]<- "NO TO: Other, please specify"
```

##One participant's text response was not clear ("Ca"), thus their response to the previous question regarding if they had past experience with AI was re-coded to 'No' (instead of 'yes' given the lack of clarity to her text response). As such, their text response to the question about which AI they have used was removed.

```
LG.vari.renamed$`Family caregivers past AI experience`[which(LG.vari.renamed$`AI technology family caregivers have used befo
re - Other`=="Other, please specify"&
                                                                LG.vari.renamed$`Responses to AI technology family caregivers h
ave used before`%in%c("Ca"))]<- "No"

LG.vari.renamed$`AI technology family caregivers have used before - AI-based wearable devices`[which(LG.vari.renamed$`AI tec
hnology family caregivers have used before - Other`=="Other, please specify"&
                                                                                                LG.vari.renamed$`Respon
ses to AI technology family caregivers have used before`%in%c("Ca"))]<- ""

LG.vari.renamed$`AI technology family caregivers have used before - AI-based assistive technology`[which(LG.vari.renamed$`AI
technology family caregivers have used before - Other`=="Other, please specify"&
                                                                                                    LG.vari.renamed$`Re
sponses to AI technology family caregivers have used before`%in%c("Ca"))]<- ""

LG.vari.renamed$`AI technology family caregivers have used before - AI-based chatbots/virtual assistants`[which(LG.vari.rena
med$`AI technology family caregivers have used before - Other`=="Other, please specify"&
                                                                                                        LG.vari.re
named$`Responses to AI technology family caregivers have used before`%in%c("Ca"))]<- ""

LG.vari.renamed$`AI technology family caregivers have used before - Other`[which(LG.vari.renamed$`AI technology family careg
ivers have used before - Other`=="Other, please specify"&
                                                                        LG.vari.renamed$`Responses to AI technolo
gy family caregivers have used before`%in%c("Ca"))]<- ""
```

##Among those text responses that were re-coded, we removed their text responses from the 'response' column

```
LG.vari.renamed$`Responses to AI technology family caregivers have used before`[which(LG.vari.renamed$`Responses to AI techn
ology family caregivers have used before`%in%c("Dexcom suivi diabète", "Ca"))]<-""
```

#AI KNOWLEDGE

##Converting from character into factor

```
LG.vari.renamed$`Family caregivers' knowledge about AI`<-factor(LG.vari.renamed$`Family caregivers' knowledge about AI`,
                                                        levels=c("Not knowledgeable", "Somewhat knowledgeable",
                                                                 "Moderately knowledgeable","Extremely knowledgeabl
e"))
```

#Performance Expectancy construct's items - Converting from character into factor

```
LG.vari.renamed$PEr1<-factor(LG.vari.renamed$PEr1, levels=c ("Strongly Disagree", "Disagree", "Agree", "Strongly Agree", "I
don't know"))
LG.vari.renamed$PEr2<-factor(LG.vari.renamed$PEr2, levels=c ("Strongly Disagree", "Disagree", "Agree", "Strongly Agree", "I
don't know"))
LG.vari.renamed$PEr3<-factor(LG.vari.renamed$PEr3, levels=c ("Strongly Disagree", "Disagree", "Agree", "Strongly Agree", "I
don't know"))
LG.vari.renamed$PEr4<-factor(LG.vari.renamed$PEr4, levels=c ("Strongly Disagree", "Disagree", "Agree", "Strongly Agree", "I
don't know"))
LG.vari.renamed$PEr5<-factor(LG.vari.renamed$PEr5, levels=c ("Strongly Disagree", "Disagree", "Agree", "Strongly Agree", "I
don't know"))
LG.vari.renamed$PEr6<-factor(LG.vari.renamed$PEr6, levels=c ("Strongly Disagree", "Disagree", "Agree", "Strongly Agree", "I
don't know"))
```

#Effort Expectancy construct's items - Converting from character into factor

```
LG.vari.renamed$EEr1<-factor(LG.vari.renamed$EEr1, levels=c ("Strongly Disagree", "Disagree", "Agree", "Strongly Agree", "I
don't know"))
LG.vari.renamed$EEr2<-factor(LG.vari.renamed$EEr2, levels=c ("Strongly Disagree", "Disagree", "Agree", "Strongly Agree", "I
don't know"))
LG.vari.renamed$EEr3<-factor(LG.vari.renamed$EEr3, levels=c ("Strongly Disagree", "Disagree", "Agree", "Strongly Agree", "I
don't know"))
LG.vari.renamed$EEr4<-factor(LG.vari.renamed$EEr4, levels=c ("Strongly Disagree", "Disagree", "Agree", "Strongly Agree", "I
don't know"))
LG.vari.renamed$EEr5<-factor(LG.vari.renamed$EEr5, levels=c ("Strongly Disagree", "Disagree", "Agree", "Strongly Agree", "I
don't know"))
```

#Social Influence construct's items - Converting from character into factor

```
LG.vari.renamed$SIr1<-factor(LG.vari.renamed$SIr1, levels=c ("Strongly Disagree", "Disagree", "Agree", "Strongly Agree", "I
don't know"))
LG.vari.renamed$SIr2<-factor(LG.vari.renamed$SIr2, levels=c ("Strongly Disagree", "Disagree", "Agree", "Strongly Agree", "I
don't know"))
LG.vari.renamed$SIr3<-factor(LG.vari.renamed$SIr3, levels=c ("Strongly Disagree", "Disagree", "Agree", "Strongly Agree", "I
don't know"))
```

#Facilitating Conditions construct's items - Converting from character into factor

```
LG.vari.renamed$FCr1<-factor(LG.vari.renamed$FCr1, levels=c ("Strongly Disagree", "Disagree", "Agree", "Strongly Agree", "I
don't know"))
LG.vari.renamed$FCr2<-factor(LG.vari.renamed$FCr2, levels=c ("Strongly Disagree", "Disagree", "Agree", "Strongly Agree", "I
don't know"))
```

#Technology Anxiety construct's items - Converting from character into factor

```
LG.vari.renamed$TAr1<-factor(LG.vari.renamed$TAr1,levels=c ("Strongly Disagree", "Disagree", "Agree", "Strongly Agree", "I d
on't know"))
LG.vari.renamed$TAr2<-factor(LG.vari.renamed$TAr2,levels=c ("Strongly Disagree", "Disagree", "Agree", "Strongly Agree", "I d
on't know"))
LG.vari.renamed$TAr3<-factor(LG.vari.renamed$TAr3,levels=c ("Strongly Disagree", "Disagree", "Agree", "Strongly Agree", "I d
on't know"))
LG.vari.renamed$TAr4<-factor(LG.vari.renamed$TAr4,levels=c ("Strongly Disagree", "Disagree", "Agree", "Strongly Agree", "I d
on't know"))
```

#Perceived Trust construct's items - Converting from character into factor

```
LG.vari.renamed$PTr1<-factor(LG.vari.renamed$PTr1,levels=c ("Strongly Disagree", "Disagree", "Agree", "Strongly Agree", "I d
on't know"))
LG.vari.renamed$PTr2<-factor(LG.vari.renamed$PTr2,levels=c ("Strongly Disagree", "Disagree", "Agree", "Strongly Agree", "I d
on't know"))
LG.vari.renamed$PTr3<-factor(LG.vari.renamed$PTr3,levels=c ("Strongly Disagree", "Disagree", "Agree", "Strongly Agree", "I d
on't know"))
```

#Perceived Cost construct's items - Converting from character into factor

```
LG.vari.renamed$PCr1<-factor(LG.vari.renamed$PCr1,levels=c ("Strongly Disagree", "Disagree", "Agree", "Strongly Agree", "I d
on't know"))
LG.vari.renamed$PCr2<-factor(LG.vari.renamed$PCr2,levels=c ("Strongly Disagree", "Disagree", "Agree", "Strongly Agree", "I d
on't know"))
```

#Expert Advice construct's items - Converting from character into factor

```
LG.vari.renamed$EAr1<-factor(LG.vari.renamed$EAr1,levels=c ("Strongly Disagree", "Disagree", "Agree", "Strongly Agree", "I d
on't know"))
LG.vari.renamed$EAr2<-factor(LG.vari.renamed$EAr2,levels=c ("Strongly Disagree", "Disagree", "Agree", "Strongly Agree", "I d
on't know"))
LG.vari.renamed$EAr3<-factor(LG.vari.renamed$EAr3,levels=c ("Strongly Disagree", "Disagree", "Agree", "Strongly Agree", "I d
on't know"))
LG.vari.renamed$EAr4<-factor(LG.vari.renamed$EAr4,levels=c ("Strongly Disagree", "Disagree", "Agree", "Strongly Agree", "I d
on't know"))
```

#Behavioral Intention construct's items - Converting from character into factor

```
LG.vari.renamed$BIr1<-factor(LG.vari.renamed$BIr1,levels=c ("Strongly Disagree", "Disagree", "Agree", "Strongly Agree", "I d
on't know"))
LG.vari.renamed$BIr2<-factor(LG.vari.renamed$BIr2,levels=c ("Strongly Disagree", "Disagree", "Agree", "Strongly Agree", "I d
on't know"))
LG.vari.renamed$BIr3<-factor(LG.vari.renamed$BIr3,levels=c ("Strongly Disagree", "Disagree", "Agree", "Strongly Agree", "I d
on't know"))
```

#**Adding new columns.** Based on participant's text response, we inserted two new column/response option as shown below:

##Relationship to care recipient

###Create new column and convert it from character to factor

```
library(tibble)
LG.variRN.C1<- add_column(LG.vari.renamed,"Relationship to care recipient - Neighbour" = "NO TO: Neighbour", .after="Relatio
nship to care recipient - friend")
LG.variRN.C1$`Relationship to care recipient - Neighbour`<-factor(LG.variRN.C1$`Relationship to care recipient - Neighbour`,
levels=c("Neighbour", "NO TO: Neighbour"))
```

###One participants text responses related to being the neighbour to the care recipient will be re-coded from "NO TO: Neighbour" to "Neighbour". Then,their 'other, please specify' responses will not be applicable so it was re-coded to 'NO TO: Other, please specify'.

```
LG.variRN.C1$`Relationship to care recipient - Neighbour`[which(LG.vari.renamed$`Relationship to care recipient - other`=="O
ther, please specify"&
                                                              LG.variRN.C1$`Responses to relationship to care recipient`%i
n%c("une voisine"))]<- "Neighbour"
LG.variRN.C1$`Relationship to care recipient - other`[which(LG.vari.renamed$`Relationship to care recipient - other`=="Othe
r, please specify"&
                                                            LG.variRN.C1$`Responses to relationship to care recipient`%in%
c("une voisine"))]<- "NO TO: Other, please specify"
```

###All relationship-related text responses that were re-coded from the above lines of codes, including the ones near the beginning of the R script, we removed their text responses from the 'response' column

```
LG.variRN.C1$`Responses to relationship to care recipient`[which(LG.variRN.C1$`Responses to relationship to care recipient`%
in%c ("father", "ma mere", "mere", "Mere", "mère", "Mère", "mother", "Mother",

"parent", "Parent", "parents", "Parents", "Parents Père et Mere",

"pere", "Pere", "père", "Père","brother","grand mère","une voisine"))]<-""
```

##Living arrangement of care recipient

###Create new column and convert it from character to factor

```
LG.variRN.C2<-add_column(LG.variRN.C1, "Living arrangement - RPA or equivalent" = "NO TO: RPA or equivalent", .after="Living arrangement - living in long-term care/nursing home/residential home")
LG.variRN.C2$`Living arrangement - RPA or equivalent`<-factor(LG.variRN.C2$`Living arrangement - RPA or equivalent`, levels=c("RPA or equivalent", "NO TO: RPA or equivalent"))
```

###Some participants text responses related to RPA or equivalent living arrangements of the care recipient will be re-coded from “NO TO: RPA or equivalent” to “RPA or equivalent”. Then,their ‘other, please specify’ responses will not be applicable so it was re-coded to ‘NO TO: Other, please specify’

```
LG.variRN.C2$`Living arrangement - RPA or equivalent`[which(LG.variRN.C2$`Living arrangement - other`=="Other, please specify"&
                                                           LG.variRN.C2$`Responses to living arrangement`%in%c("Habitent dans logement loué de façon semi-Autonome", "Logement personnel dans une rpa", "Logement semi autonome", "RPA",
                                                                                                               "RPA avec plusieurs services", "RPA en milieu familial", "RPA semi-autonome"))]<-"RPA or equivalent"
LG.variRN.C2$`Living arrangement - other`[which(LG.variRN.C2$`Living arrangement - other`=="Other, please specify"&
                                                LG.variRN.C2$`Responses to living arrangement`%in%c("Habitent dans logement loué de façon semi-Autonome", "Logement personnel dans une rpa", "Logement semi autonome", "RPA",
                                                                                                    "RPA avec plusieurs services", "RPA en milieu familial", "RPA semi-autonome"))]<-"NO TO: Other, please specify"
```

###All living arrangement text responses that were re-coded from the above lines of codes, including the ones near the beginning of the R script, we removed their text responses from the ‘response’ column

```
LG.variRN.C2$`Responses to living arrangement`[which(LG.variRN.C2$`Responses to living arrangement`%in%c("Living with another family member", "Elle vie avec sa soeur et moi je m'occupe d'elle aux besoin",
                                                                                                                "Vit dans sa maison avec son mari", "Habitent dans logement loué de façon semi-Autonome", "Logement personnel dans une rpa", "Logement semi autonome", "RPA",
                                                                                                                "RPA avec plusieurs services", "RPA en milieu familial", "RPA semi-autonome"))]<-""
```

#**Removing a data point and replace it with NA(missing data)**, because a participant’s numerical response to how many hours of care they spend per week was ‘800’. This does not make sense as there is only 168 hours within a week.

```
LG.variRN.C2$`Estimated number of hours of care per week provided by the family caregiver`[147]<-NA
```

#**Removed participants** row number #146 (age:33) & #86 (age:44). They do not meet eligibility, which is having an age between 45-64.

```
ELIG.variRNC2<-LG.variRN.C2[-c(146,86),]
```

#Given that two rows were removed, we readjusted the row numbering

```
rownames(ELIG.variRNC2) = seq(length=nrow(ELIG.variRNC2))
```

#**Create table of demographic/caregiving/AI-realted variables**

```
library(table1)
```

```
##
## Attaching package: 'table1'
```

```
## The following objects are masked from 'package:base':
##
##     units, units<-
```

```
table1(~., ELIG.variRNC2)
```

	Overall (N=199)
Survey's Language	
Français / French	173 (86.9%)
English / Anglais	26 (13.1%)
Age	
Mean (SD)	56.7 (5.49)
Median [Min, Max]	57.0 [45.0, 64.0]
Gender	
Woman	128 (64.3%)
Man	71 (35.7%)
Education	
Elementary	1 (0.5%)
High school	44 (22.1%)
College / CEGEP	82 (41.2%)

	Overall (N=199)
Undergraduate	48 (24.1%)
Post-graduate (e.g., Masters, Ph.D.)	22 (11.1%)
Other, please specify	2 (1.0%)
Responses to Education	
	197 (99.0%)
Cours technique	1 (0.5%)
École de métier	1 (0.5%)
Employment	
Full-time	88 (44.2%)
Part-time	23 (11.6%)
Unemployed	15 (7.5%)
Retired	65 (32.7%)
Full-time caregiver	2 (1.0%)
Other, please specify	6 (3.0%)
Responses to Employment	
	193 (97.0%)
À la maison	1 (0.5%)
Aidant Naturel	0 (0%)
aidant naturel à temps plein	0 (0%)
at home	1 (0.5%)
Homemaker	1 (0.5%)
Invalide	0 (0%)
Retour aux études	0 (0%)
Travailleur autonome	1 (0.5%)
Travailleurs autonomes	1 (0.5%)
travailleuse autonome	1 (0.5%)
Years Lived in Canada	
Mean (SD)	55.3 (9.07)
Median [Min, Max]	57.0 [7.00, 64.0]
Relationship to care recipient - child	
Child	140 (70.4%)
NO TO: Child	59 (29.6%)
Relationship to care recipient - grandchild	
Grandchild	2 (1.0%)
NO TO: Grandchild	197 (99.0%)
Relationship to care recipient - spouse	
Spouse	20 (10.1%)
NO TO: Spouse	179 (89.9%)
Relationship to care recipient - sibiling	
Sibling	14 (7.0%)
NO TO: Sibling	185 (93.0%)
Relationship to care recipient - friend	
Friend	12 (6.0%)
NO TO: Friend	187 (94.0%)
Relationship to care recipient - Neighbour	
Neighbour	1 (0.5%)
NO TO: Neighbour	198 (99.5%)
Relationship to care recipient - other	
Other, please specify	12 (6.0%)
NO TO: Other, please specify	187 (94.0%)
Responses to relationship to care recipient	
	187 (94.0%)
beau frere	1 (0.5%)
beau père	1 (0.5%)
Belle-mere	1 (0.5%)
Belle-mère	3 (1.5%)
belle-mère et beau-père	1 (0.5%)
brother	0 (0%)
Conjointe de fait	1 (0.5%)
Daughter in law	1 (0.5%)
father	0 (0%)

	Overall (N=199)
gendre	1 (0.5%)
Gendre	1 (0.5%)
grand mère	0 (0%)
ma mere	0 (0%)
mere	0 (0%)
Mere	0 (0%)
mère	0 (0%)
Mère	0 (0%)
mother	0 (0%)
Mother	0 (0%)
parent	0 (0%)
Parent	0 (0%)
parents	0 (0%)
Parents	0 (0%)
Parents Père et Mere	0 (0%)
pere	0 (0%)
Pere	0 (0%)
père	0 (0%)
Père	0 (0%)
Tante	1 (0.5%)
une voisine	0 (0%)
Living arrangement - living with the family caregiver	
Living with the family caregiver	68 (34.2%)
NO TO: Living with the family caregiver	131 (65.8%)
Living arrangement - living independently in one's own home	
Living independently in one's own home	83 (41.7%)
NO TO: Living independently in one's own home	116 (58.3%)
Living arrangement - living in long-term care/nursing home/residential home	
Living in long-term care/nursing home/residential home	45 (22.6%)
NO TO: Living in long-term care/nursing home/residential home	154 (77.4%)
Living arrangement - RPA or equivalent	
RPA or equivalent	8 (4.0%)
NO TO: RPA or equivalent	191 (96.0%)
Living arrangement - other	
Other, please specify	0 (0%)
NO TO: Other, please specify	199 (100%)
Responses to living arrangement	
	199 (100%)
Elle vie avec sa soeur et moi je m'occupe d'elle aux besoin	0 (0%)
Habitent dans logement loué de façon semi-Autonome	0 (0%)
Living with another family member	0 (0%)
Logement personnel dans une rpa	0 (0%)
Logement semi autonome	0 (0%)
RPA	0 (0%)
RPA avec plusieurs services	0 (0%)
RPA en milieu familial	0 (0%)
RPA semi-autonome	0 (0%)
Vit dans sa maison avec son mari	0 (0%)
Number of older adults the family caregiver is caring for	
1	167 (83.9%)
2	29 (14.6%)
3	0 (0%)
4 or more	2 (1.0%)
Missing	1 (0.5%)
Number of years the family caregiver has been a caregiver	
Mean (SD)	7.66 (6.94)
Median [Min, Max]	6.00 [0, 56.0]
Estimated number of hours of care per week provided by the family caregiver	
Mean (SD)	16.1 (19.5)
Median [Min, Max]	10.0 [0, 168]
Missing	1 (0.5%)

	Overall (N=199)
Tasks family caregivers perform - Medical/nursing care	
Medical/nursing care (e.g., operating medical equipment like a catheter, providing wound care, assisting with medications/injections)	40 (20.1%)
NO TO: Medical/nursing care (e.g., operating medical equipment like a catheter, providing wound care, assisting with medications/injections)	159 (79.9%)
Tasks family caregivers perform - Care coordinator	
Care coordinator (e.g., communicate with healthcare providers, translator, schedule appointments)	127 (63.8%)
NO TO: Care coordinator (e.g., communicate with healthcare providers, translator, schedule appointments)	72 (36.2%)
Tasks family caregivers perform - Psychosocial care	
Psychosocial care (e.g., emotional support, companionship)	140 (70.4%)
NO TO: Psychosocial care (e.g., emotional support, companionship)	59 (29.6%)
Tasks family caregivers perform - Daily living activities	
Daily living activities (e.g., dressing, feeding, toileting, transferring)	70 (35.2%)
NO TO: Daily living activities (e.g., dressing, feeding, toileting, transferring)	129 (64.8%)
Tasks family caregivers perform - Household tasks	
Household tasks (e.g., home maintenance, grocery shopping, laundry)	142 (71.4%)
NO TO: Household tasks (e.g., home maintenance, grocery shopping, laundry)	57 (28.6%)
Tasks family caregivers perform - Transportation	
Transportation (e.g., driving the older adult to appointments)	133 (66.8%)
NO TO: Transportation (e.g., driving the older adult to appointments)	66 (33.2%)
Tasks family caregivers perform - Substitute decision-maker	
Substitute decision-maker (e.g., making health, legal and financial decisions on behalf of the older care recipient who is unable to)	87 (43.7%)
NO TO: Substitute decision-maker (e.g., making health, legal and financial decisions on behalf of the older care recipient who is unable to)	112 (56.3%)
Tasks family caregivers perform - Other	
Other, please specify	3 (1.5%)
NO TO: Other, please specify	196 (98.5%)
Responses to the tasks family caregivers perform	
	196 (98.5%)
Commissions diverses	1 (0.5%)
Épicerie	0 (0%)
Mémoire	1 (0.5%)
Moi vas son médecin avec elle et si besoin de quoi se soie moi téléphone pour elle	0 (0%)
ramasser de la merde et laver mettre des couches	0 (0%)
Répit	1 (0.5%)
surveillance immédiate maison intergénérationelle	0 (0%)
Family caregivers past AI experience	
Yes	16 (8.0%)
No	183 (92.0%)
AI technology family caregivers have used before - AI-based wearable devices	
AI-based wearable devices	11 (5.5%)
NO TO: AI-based wearable devices	5 (2.5%)
Missing	183 (92.0%)
AI technology family caregivers have used before - AI-based assistive technology	
AI-based assistive technology	4 (2.0%)
NO TO: AI-based assistive technology	12 (6.0%)
Missing	183 (92.0%)
AI technology family caregivers have used before - AI-based chatbots/virtual assistants	
AI-based chatbots/virtual assistants	2 (1.0%)
NO TO: AI-based chatbots/virtual assistants	14 (7.0%)
Missing	183 (92.0%)
AI technology family caregivers have used before - Other	
Other, please specify	0 (0%)
NO TO: Other, please specify	16 (8.0%)
Missing	183 (92.0%)
Responses to AI technology family caregivers have used before	
	199 (100%)
Ca	0 (0%)
Dexcom suivi diabète	0 (0%)
Family caregivers' knowledge about AI	
Not knowledgeable	109 (54.8%)
Somewhat knowledgeable	46 (23.1%)
Moderately knowledgeable	37 (18.6%)
Extremely knowledgeable	6 (3.0%)

	Overall (N=199)
Missing	1 (0.5%)
PEr1	
Strongly Disagree	5 (2.5%)
Disagree	21 (10.6%)
Agree	91 (45.7%)
Strongly Agree	43 (21.6%)
I don't know	39 (19.6%)
PEr2	
Strongly Disagree	5 (2.5%)
Disagree	25 (12.6%)
Agree	88 (44.2%)
Strongly Agree	43 (21.6%)
I don't know	37 (18.6%)
Missing	1 (0.5%)
PEr3	
Strongly Disagree	8 (4.0%)
Disagree	19 (9.5%)
Agree	87 (43.7%)
Strongly Agree	49 (24.6%)
I don't know	35 (17.6%)
Missing	1 (0.5%)
PEr4	
Strongly Disagree	5 (2.5%)
Disagree	23 (11.6%)
Agree	82 (41.2%)
Strongly Agree	44 (22.1%)
I don't know	44 (22.1%)
Missing	1 (0.5%)
PEr5	
Strongly Disagree	6 (3.0%)
Disagree	16 (8.0%)
Agree	84 (42.2%)
Strongly Agree	56 (28.1%)
I don't know	35 (17.6%)
Missing	2 (1.0%)
PEr6	
Strongly Disagree	5 (2.5%)
Disagree	12 (6.0%)
Agree	85 (42.7%)
Strongly Agree	68 (34.2%)
I don't know	29 (14.6%)
EEr1	
Strongly Disagree	17 (8.5%)
Disagree	50 (25.1%)
Agree	65 (32.7%)
Strongly Agree	14 (7.0%)
I don't know	53 (26.6%)
EEr2	
Strongly Disagree	3 (1.5%)
Disagree	22 (11.1%)
Agree	99 (49.7%)
Strongly Agree	27 (13.6%)
I don't know	47 (23.6%)
Missing	1 (0.5%)
EEr3	
Strongly Disagree	3 (1.5%)
Disagree	19 (9.5%)
Agree	96 (48.2%)
Strongly Agree	40 (20.1%)
I don't know	40 (20.1%)
Missing	1 (0.5%)

	Overall (N=199)
EEr4	
Strongly Disagree	12 (6.0%)
Disagree	37 (18.6%)
Agree	57 (28.6%)
Strongly Agree	27 (13.6%)
I don't know	65 (32.7%)
Missing	1 (0.5%)
EEr5	
Strongly Disagree	7 (3.5%)
Disagree	18 (9.0%)
Agree	94 (47.2%)
Strongly Agree	35 (17.6%)
I don't know	44 (22.1%)
Missing	1 (0.5%)
SIr1	
Strongly Disagree	11 (5.5%)
Disagree	37 (18.6%)
Agree	82 (41.2%)
Strongly Agree	23 (11.6%)
I don't know	46 (23.1%)
SIr2	
Strongly Disagree	16 (8.0%)
Disagree	40 (20.1%)
Agree	74 (37.2%)
Strongly Agree	33 (16.6%)
I don't know	36 (18.1%)
SIr3	
Strongly Disagree	4 (2.0%)
Disagree	18 (9.0%)
Agree	90 (45.2%)
Strongly Agree	40 (20.1%)
I don't know	46 (23.1%)
Missing	1 (0.5%)
FCr1	
Strongly Disagree	4 (2.0%)
Disagree	11 (5.5%)
Agree	102 (51.3%)
Strongly Agree	40 (20.1%)
I don't know	42 (21.1%)
FCr2	
Strongly Disagree	4 (2.0%)
Disagree	25 (12.6%)
Agree	83 (41.7%)
Strongly Agree	28 (14.1%)
I don't know	58 (29.1%)
Missing	1 (0.5%)
TAr1	
Strongly Disagree	12 (6.0%)
Disagree	43 (21.6%)
Agree	78 (39.2%)
Strongly Agree	27 (13.6%)
I don't know	39 (19.6%)
TAr2	
Strongly Disagree	21 (10.6%)
Disagree	74 (37.2%)
Agree	55 (27.6%)
Strongly Agree	20 (10.1%)
I don't know	28 (14.1%)
Missing	1 (0.5%)
TAr3	
Strongly Disagree	10 (5.0%)

	Overall (N=199)
Disagree	19 (9.5%)
Agree	97 (48.7%)
Strongly Agree	48 (24.1%)
I don't know	23 (11.6%)
Missing	2 (1.0%)
TAr4	
Strongly Disagree	22 (11.1%)
Disagree	73 (36.7%)
Agree	57 (28.6%)
Strongly Agree	20 (10.1%)
I don't know	27 (13.6%)
PTr1	
Strongly Disagree	17 (8.5%)
Disagree	61 (30.7%)
Agree	57 (28.6%)
Strongly Agree	30 (15.1%)
I don't know	34 (17.1%)
PTr2	
Strongly Disagree	7 (3.5%)
Disagree	21 (10.6%)
Agree	87 (43.7%)
Strongly Agree	27 (13.6%)
I don't know	57 (28.6%)
PTr3	
Strongly Disagree	14 (7.0%)
Disagree	49 (24.6%)
Agree	67 (33.7%)
Strongly Agree	33 (16.6%)
I don't know	36 (18.1%)
PCr1	
Strongly Disagree	3 (1.5%)
Disagree	32 (16.1%)
Agree	54 (27.1%)
Strongly Agree	32 (16.1%)
I don't know	78 (39.2%)
PCr2	
Strongly Disagree	10 (5.0%)
Disagree	37 (18.6%)
Agree	64 (32.2%)
Strongly Agree	35 (17.6%)
I don't know	53 (26.6%)
EAr1	
Strongly Disagree	4 (2.0%)
Disagree	23 (11.6%)
Agree	81 (40.7%)
Strongly Agree	55 (27.6%)
I don't know	35 (17.6%)
Missing	1 (0.5%)
EAr2	
Strongly Disagree	2 (1.0%)
Disagree	22 (11.1%)
Agree	84 (42.2%)
Strongly Agree	53 (26.6%)
I don't know	38 (19.1%)
EAr3	
Strongly Disagree	4 (2.0%)
Disagree	14 (7.0%)
Agree	100 (50.3%)
Strongly Agree	50 (25.1%)
I don't know	30 (15.1%)
Missing	1 (0.5%)

	Overall (N=199)
EAr4	
Strongly Disagree	4 (2.0%)
Disagree	22 (11.1%)
Agree	82 (41.2%)
Strongly Agree	44 (22.1%)
I don't know	45 (22.6%)
Missing	2 (1.0%)
BIr1	
Strongly Disagree	12 (6.0%)
Disagree	33 (16.6%)
Agree	55 (27.6%)
Strongly Agree	9 (4.5%)
I don't know	89 (44.7%)
Missing	1 (0.5%)
BIr2	
Strongly Disagree	8 (4.0%)
Disagree	21 (10.6%)
Agree	91 (45.7%)
Strongly Agree	33 (16.6%)
I don't know	46 (23.1%)
BIr3	
Strongly Disagree	23 (11.6%)
Disagree	54 (27.1%)
Agree	40 (20.1%)
Strongly Agree	8 (4.0%)
I don't know	73 (36.7%)
Missing	1 (0.5%)

#Create a stacked bar-plot of the Likert scale responses to the BI items

```
library("tidyverse")
```

```
## ── Attaching packages ─────────────────────────────────────── tidyverse 1.3.2 ──
## ✓ ggplot2 3.4.0     ✓ purrr   0.3.5
## ✓ tidyr   1.2.1     ✓ stringr 1.4.1
## ✓ readr   2.1.3     ✓ forcats 0.5.2
## ── Conflicts ────────────────────────────────────────── tidyverse_conflicts() ──
## ✖ dplyr::filter() masks stats::filter()
## ✖ dplyr::lag()    masks stats::lag()
```

```
BIr1.char<-as.character(ELIG.variRNC2$BIr1)
BIr2.char<-as.character(ELIG.variRNC2$BIr2)
BIr3.char<-as.character(ELIG.variRNC2$BIr3)
BIs<-cbind(BIr1.char, BIr2.char, BIr3.char)
BIitems<-data.frame(BIs)

for(i in 1:nrow(BIitems)){
  if(is.na(BIitems$BIr1[i])) BIitems$BIr1[i] <- "Missing"
  if(is.na(BIitems$BIr3[i])) BIitems$BIr3[i] <- "Missing"
}

BI1 <-BIitems$BIr1.char
BI2 <-BIitems$BIr2.char
BI3 <-BIitems$BIr3.char

TotalBI<- data.frame(BI1, BI2, BI3)

TotalBI %>% group_by(BI1, BI2, BI3) %>%
  summarise(n = n())
```

```
## `summarise()` has grouped output by 'BI1', 'BI2'. You can override using the
## `.groups` argument.
```

```
## # A tibble: 36 × 4
## # Groups:   BI1, BI2 [16]
##    BI1   BI2            BI3                 n
##    <chr> <chr>          <chr>           <int>
##  1 Agree Agree          Agree              19
##  2 Agree Agree          Disagree            8
##  3 Agree Agree          I don't know        5
##  4 Agree Agree          Strongly Disagree   2
##  5 Agree Agree          <NA>                1
##  6 Agree Disagree       Agree               1
##  7 Agree Strongly Agree Agree               9
##  8 Agree Strongly Agree Disagree            7
##  9 Agree Strongly Agree I don't know        1
## 10 Agree Strongly Agree Strongly Agree      2
## # … with 26 more rows
```

```
BI1 <- factor(BIitems$BIr1, levels = c('Strongly Agree','Agree','Disagree','Strongly Disagree',"I don't know",'Missing'))
BI2 <- factor(BIitems$BIr2, levels = c('Strongly Agree','Agree','Disagree','Strongly Disagree',"I don't know",'Missing'))
BI3 <- factor(BIitems$BIr3, levels = c('Strongly Agree','Agree','Disagree','Strongly Disagree',"I don't know",'Missing'))


Legend<- c(BI1, BI2, BI3)

BI.prep <- c(rep("Item 1: I will use AI-based technologies for older adult care in the future", length(BIitems$BIr1.char)),
             rep("Item 2: If I have access to AI-based technologies for older adult care, I would use the service", length(B
Iitems$BIr2.char)),
             rep("Item 3: I intend to invest and use AI-based technologies for older adult care as much as possible", length
(BIitems$BIr3.char)))

BI.prep = str_wrap(BI.prep, width = 20)

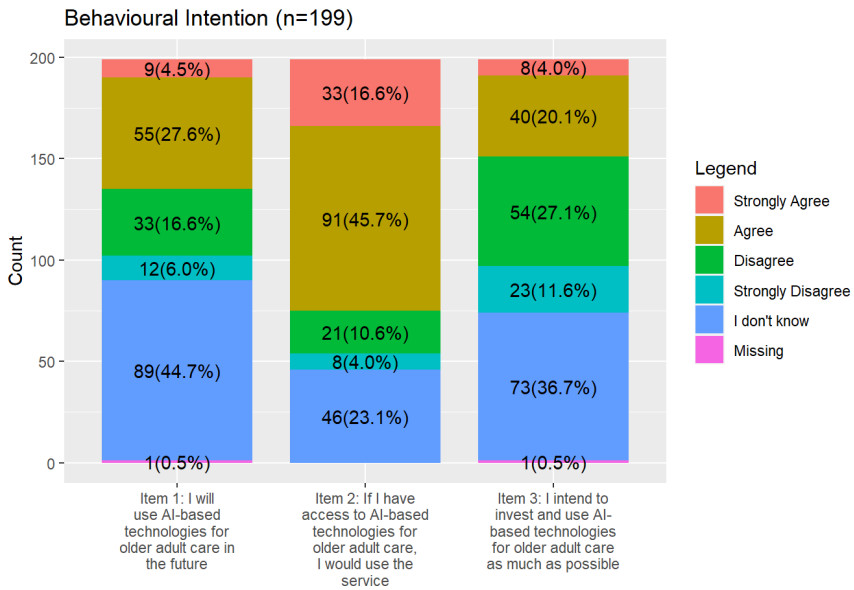
BI.prep2<- data.frame(Legend, BI.prep)

BI.prep4 <- BI.prep2 %>% group_by(BI.prep, Legend) %>%
  summarise(n = n())%>%
  mutate(perc = round((n/sum(n))*100, 1))
```

```
## `summarise()` has grouped output by 'BI.prep'. You can override using the
## `.groups` argument.
```

```
BI.prep4$tex <- c("9(4.5%)", "55(27.6%)","33(16.6%)", "12(6.0%)", "89(44.7%)",
                  "1(0.5%)","33(16.6%)","91(45.7%)","21(10.6%)","8(4.0%)","46(23.1%)",
                  "8(4.0%)","40(20.1%)","54(27.1%)","23(11.6%)","73(36.7%)","1(0.5%)")

ggplot(BI.prep4, aes(x = BI.prep, y = n, fill = Legend)) +
  geom_bar(width = 0.8, stat = "identity", position = "stack") +
  labs(x = "", y = "Count", title = "Behavioural Intention (n=199)") +
  geom_text(aes(label = tex), stat = "identity", position = position_stack(vjust = 0.5))
```



#Preparing the constructs' items

##Convert all constructs' items responses into their respective numerical values (strongly disagree = 1, disagree = 2, agree = 3, strongly agree = 4)

##The option of 'I don't know' (numeric value of 5) was replaced with NA (i.e., missing value)

##Due to the wording of some items, we reverse coded some (i.e., 1=4, 2=3, 3=2, 4=1)

##Based on the constructs' items responses we generated a mean construct score for each participant. So if a construct had 3 items - 2 items had a response, but for one item there was missing data, then the mean construct score for that participant will be generated based on the 2 items (that had a response). If all 3 items (for a construct) had missing data, then the construct mean score could not be generated; as a result, that participant's mean construct score will be missing.

###PE CONSTRUCT ITEMS

```
PEr1.num<-as.numeric(ELIG.variRNC2$PEr1)
PEr1.num[which(PEr1.num==5)]<-NA

PEr2.num<-as.numeric(ELIG.variRNC2$PEr2)
PEr2.num[which(PEr2.num==5)]<-NA

PEr3.num<-as.numeric(ELIG.variRNC2$PEr3)
PEr3.num[which(PEr3.num==5)]<-NA

PEr4.num<-as.numeric(ELIG.variRNC2$PEr4)
PEr4.num[which(PEr4.num==5)]<-NA

PEr5.num<-as.numeric(ELIG.variRNC2$PEr5)
PEr5.num[which(PEr5.num==5)]<-NA

PEr6.num<-as.numeric(ELIG.variRNC2$PEr6)
PEr6.num[which(PEr6.num==5)]<-NA

PEr.T<-cbind(PEr1.num,PEr2.num,PEr3.num,PEr4.num,PEr5.num,PEr6.num)
PEr.score<-round(apply(PEr.T,1,mean,na.rm=T),2)
```

###EE CONSTRUCT ITEMS

```
EEr1.num<-as.numeric(ELIG.variRNC2$EEr1)
EEr1.num[which(EEr1.num==5)]<-NA

EEr2.num<-as.numeric(ELIG.variRNC2$EEr2)
EEr2.num[which(EEr2.num==5)]<-NA

EEr3.num<-as.numeric(ELIG.variRNC2$EEr3)
EEr3.num[which(EEr3.num==5)]<-NA

EEr4.num<-as.numeric(ELIG.variRNC2$EEr4)
EEr4.num[which(EEr4.num==5)]<-NA

EEr5.num<-as.numeric(ELIG.variRNC2$EEr5)
EEr5.num[which(EEr5.num==5)]<-NA

EEr.T<-cbind(EEr1.num, EEr2.num, EEr3.num, EEr4.num, EEr5.num)
EEr.score<-round(apply(EEr.T,1,mean,na.rm=T),2)
```

###SI CONSTRUCT ITEMS

```
SIr1.num<-as.numeric(ELIG.variRNC2$SIr1)
SIr1.num[which(SIr1.num==5)]<-NA

SIr2.num<-as.numeric(ELIG.variRNC2$SIr2)
SIr2.num[which(SIr2.num==5)]<-NA

SIr3.num<-as.numeric(ELIG.variRNC2$SIr3)
SIr3.num[which(SIr3.num==5)]<-NA

SIr.T<-cbind(SIr1.num, SIr2.num, SIr3.num)
SIr.score<-round(apply(SIr.T,1,mean,na.rm=T),2)
```

###FC CONSTRUCT ITEMS

```
FCr1.num<-as.numeric(ELIG.variRNC2$FCr1)
FCr1.num[which(FCr1.num==5)]<-NA

FCr2.num<-as.numeric(ELIG.variRNC2$FCr2)
FCr2.num[which(FCr2.num==5)]<-NA

FCr.T<-cbind(FCr1.num, FCr2.num)
FCr.score<-round(apply(FCr.T,1,mean,na.rm=T),2)
```

###TA CONSTRUCT ITEMS

####Two TA items were reversed coded

```
TAr1.num<-as.numeric(ELIG.variRNC2$TAr1)
TAr1.num[which(TAr1.num==5)]<-NA
TAr1.num<-5-TAr1.num

TAr2.num<-as.numeric(ELIG.variRNC2$TAr2)
TAr2.num[which(TAr2.num==5)]<-NA

TAr3.num<-as.numeric(ELIG.variRNC2$TAr3)
TAr3.num[which(TAr3.num==5)]<-NA
TAr3.num<-5-TAr3.num

TAr4.num<-as.numeric(ELIG.variRNC2$TAr4)
TAr4.num[which(TAr4.num==5)]<-NA

TAr.T<-cbind(TAr1.num, TAr2.num, TAr3.num, TAr4.num)
TAr.score<-round(apply(TAr.T,1,mean,na.rm=T),2)
```

###PT CONSTRUCT ITEMS

####Two PT items were reversed coded

```
PTr1.num<-as.numeric(ELIG.variRNC2$PTr1)
PTr1.num[which(PTr1.num==5)]<-NA
PTr1.num<-5-PTr1.num

PTr2.num<-as.numeric(ELIG.variRNC2$PTr2)
PTr2.num[which(PTr2.num==5)]<-NA

PTr3.num<-as.numeric(ELIG.variRNC2$PTr3)
PTr3.num[which(PTr3.num==5)]<-NA
PTr3.num<-5-PTr3.num

PTr.T<-cbind(PTr1.num, PTr2.num, PTr3.num)
PTr.score<-round(apply(PTr.T,1,mean,na.rm=T),2)
```

###PC CONSTRUCT ITEMS

```
PCr1.num<-as.numeric(ELIG.variRNC2$PCr1)
PCr1.num[which(PCr1.num==5)]<-NA

PCr2.num<-as.numeric(ELIG.variRNC2$PCr2)
PCr2.num[which(PCr2.num==5)]<-NA

PCr.T<-cbind(PCr1.num, PCr2.num)
PCr.score<-round(apply(PCr.T,1,mean,na.rm=T),2)
```

###EA CONSTRUCT ITEMS

```
EAr1.num<-as.numeric(ELIG.variRNC2$EAr1)
EAr1.num[which(EAr1.num==5)]<-NA

EAr2.num<-as.numeric(ELIG.variRNC2$EAr2)
EAr2.num[which(EAr2.num==5)]<-NA

EAr4.num<-as.numeric(ELIG.variRNC2$EAr4)
EAr4.num[which(EAr4.num==5)]<-NA

EAr.T<-cbind(EAr1.num, EAr2.num, EAr4.num)
EAr.score<-round(apply(EAr.T,1,mean,na.rm=T),2)
```

###EA2 CONSTRUCT ITEMS

```
EAr3.num<-as.numeric(ELIG.variRNC2$EAr3)
EAr3.num[which(EAr3.num==5)]<-NA

EA2r.T<-cbind(EAr3.num)
EA2r.score<-round(apply(EA2r.T,1,mean,na.rm=T),2)
```

###BI CONSTRUCT ITEMS

```
BIr1.num<-as.numeric(ELIG.variRNC2$BIr1)
BIr1.num[which(BIr1.num==5)]<-NA

BIr2.num<-as.numeric(ELIG.variRNC2$BIr2)
BIr2.num[which(BIr2.num==5)]<-NA

BIr3.num<-as.numeric(ELIG.variRNC2$BIr3)
BIr3.num[which(BIr3.num==5)]<-NA

BIr.T<-cbind(BIr1.num, BIr2.num, BIr3.num)
BIr.score<-round(apply(BIr.T,1,mean,na.rm=T),2)
```

###Combine all the constructs' scores

```
Constructs.num<-cbind(PEr.score, EEr.score, SIr.score, FCr.score, TAr.score, PTr.score,
                      PCr.score, EAr.score, EA2r.score, BIr.score)
```

#Create a visual to illustrate the distribution of constructs' scores

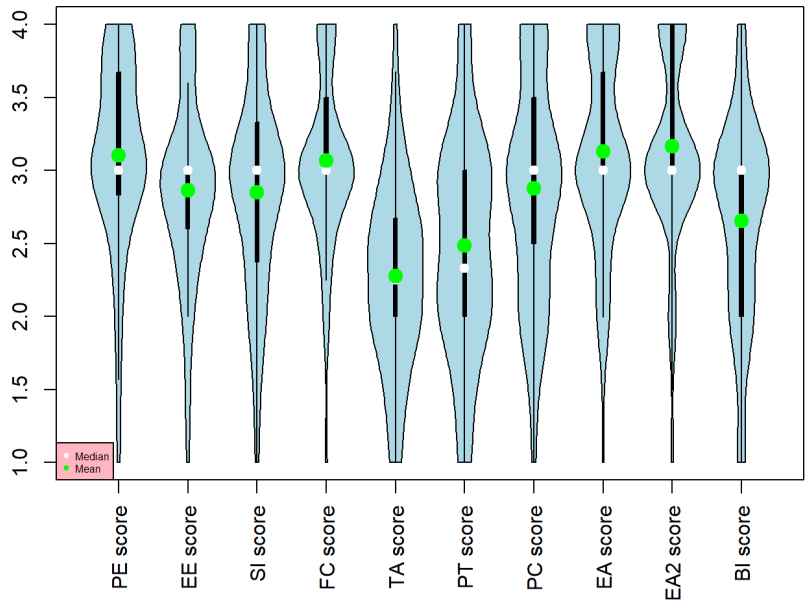
```
## Loading required package: sm
```

```
## Package 'sm', version 2.2-5.7: type help(sm) for summary information
```

```
## Loading required package: zoo
```

```
##
## Attaching package: 'zoo'
```

```
## The following objects are masked from 'package:base':
##
##     as.Date, as.Date.numeric
```




```
## Loading required package: colorspace
```

```
## Loading required package: grid
```

```
## VIM is ready to use.
```

```
## Suggestions and bug-reports can be submitted at: https://github.com/statistikat/VIM/issues
```

```
##
## Attaching package: 'VIM'
```

```
## The following object is masked from 'package:datasets':
##
##     sleep
```

#Examine missing data

##Missing data includes both missing data (i.e., respondent's did not put an answer/response) and 'I don't know' responses (which were converted to missing data, as mentoined previously in the above codes).

##The purpose of running the 'aggr' (i.e., aggregation for missing values) function below was to see if there was a pattern of missing data that was most prevalent within each construct (since each construct has between 1-6 items).

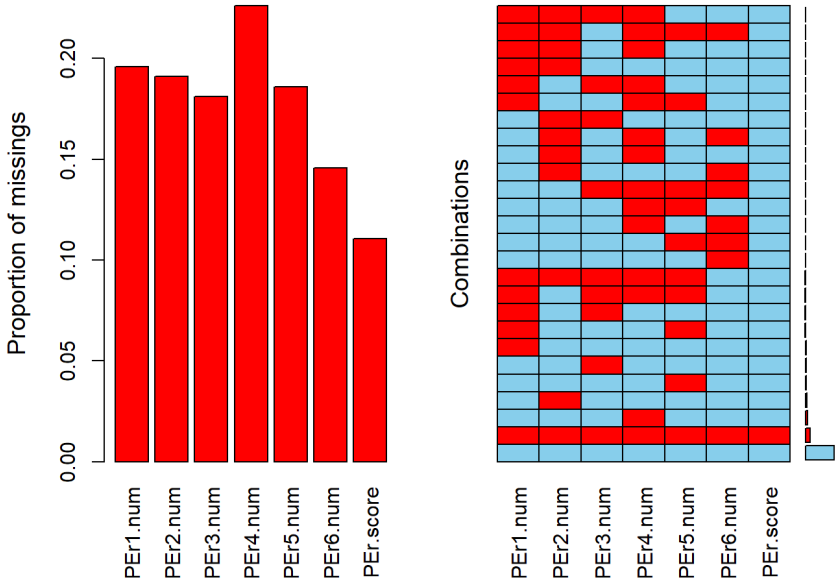
##When no construct mean score could be computed, it is reflected as the combination of 1:1:1:1:1 (i.e, all items to measure a construct did not have a response), as such this was considered to be missing data.

##While, the full data pattern is reflected as the combination of 0:0:0:0 (i.e., all items to measure a construct had a response).

##Based on what we ran the most prevalent pattern.combination was full data across all constructs.

###PE CONSTRUCT

```
PEr.MD<-cbind(PEr1.num,PEr2.num,PEr3.num,PEr4.num,PEr5.num,PEr6.num,PEr.score)
PE.missing<-aggr(PEr.MD)
```

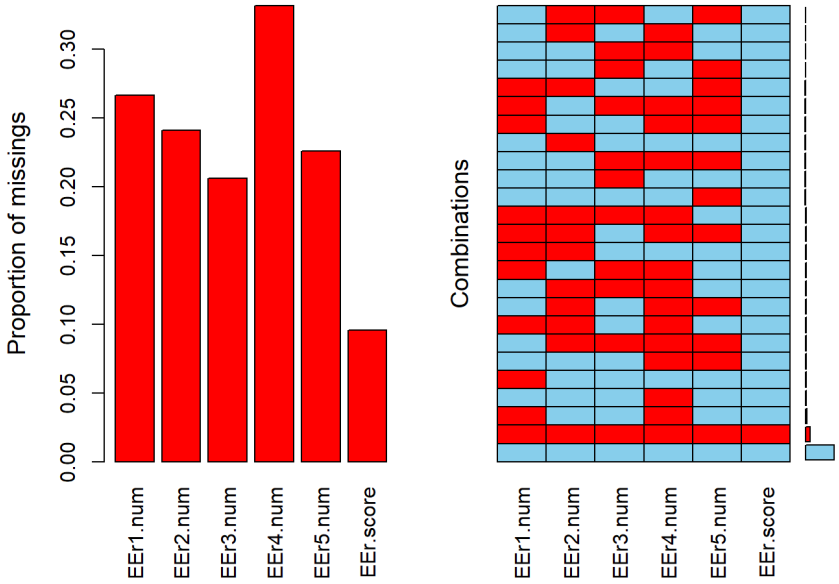



```
summary(PE.missing)
```

```
##
##  Missings per variable:
##   Variable Count
##   PEr1.num    39
##   PEr2.num    38
##   PEr3.num    36
##   PEr4.num    45
##   PEr5.num    37
##   PEr6.num    29
##  PEr.score    22
##
##  Missings in combinations of variables:
##   Combinations Count    Percent
##  0:0:0:0:0:0:0   128 64.3216080
##  0:0:0:0:0:1:0     1  0.5025126
##  0:0:0:0:1:0:0     4  2.0100503
##  0:0:0:0:1:1:0     1  0.5025126
##  0:0:0:1:0:0:0     9  4.5226131
##  0:0:0:1:0:1:0     1  0.5025126
##  0:0:0:1:1:0:0     1  0.5025126
##  0:0:1:0:0:0:0     4  2.0100503
##  0:0:1:1:1:1:0     1  0.5025126
##  0:1:0:0:0:0:0     6  3.0150754
##  0:1:0:0:0:1:0     1  0.5025126
##  0:1:0:1:0:0:0     1  0.5025126
##  0:1:0:1:0:1:0     1  0.5025126
##  0:1:1:0:0:0:0     1  0.5025126
##  1:0:0:0:0:0:0     3  1.5075377
##  1:0:0:0:1:0:0     2  1.0050251
##  1:0:0:1:1:0:0     1  0.5025126
##  1:0:1:0:0:0:0     2  1.0050251
##  1:0:1:1:0:0:0     1  0.5025126
##  1:0:1:1:1:0:0     2  1.0050251
##  1:1:0:0:0:0:0     1  0.5025126
##  1:1:0:1:0:0:0     1  0.5025126
##  1:1:0:1:1:1:0     1  0.5025126
##  1:1:1:1:0:0:0     1  0.5025126
##  1:1:1:1:1:0:0     2  1.0050251
##  1:1:1:1:1:1:1    22 11.0552764
```

###EE CONSTRUCT

```
EEr.MD<-cbind(EEr1.num, EEr2.num, EEr3.num, EEr4.num, EEr5.num,EEr.score)
EE.missing<-aggr(EEr.MD)
```

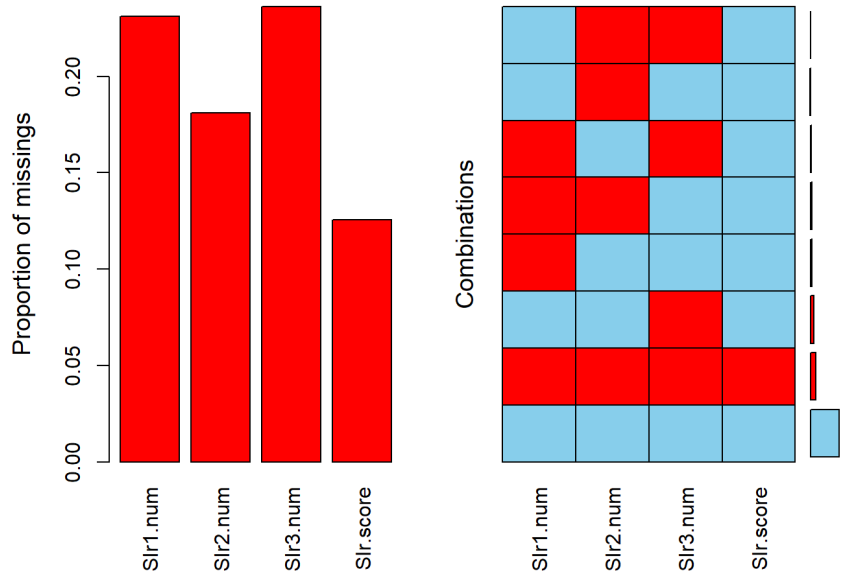



```
summary(EE.missing)
```

```
##
##  Missings per variable:
##   Variable Count
##   EEr1.num    53
##   EEr2.num    48
##   EEr3.num    41
##   EEr4.num    66
##   EEr5.num    45
##  EEr.score    19
##
##  Missings in combinations of variables:
##  Combinations Count    Percent
##   0:0:0:0:0:0   115 57.7889447
##   0:0:0:0:1:0     2  1.0050251
##   0:0:0:1:0:0     5  2.5125628
##   0:0:0:1:1:0     4  2.0100503
##   0:0:1:0:0:0     2  1.0050251
##   0:0:1:0:1:0     1  0.5025126
##   0:0:1:1:0:0     1  0.5025126
##   0:0:1:1:1:0     2  1.0050251
##   0:1:0:0:0:0     2  1.0050251
##   0:1:0:1:0:0     1  0.5025126
##   0:1:0:1:1:0     3  1.5075377
##   0:1:1:0:1:0     1  0.5025126
##   0:1:1:1:0:0     3  1.5075377
##   0:1:1:1:1:0     4  2.0100503
##   1:0:0:0:0:0     5  2.5125628
##   1:0:0:1:0:0     7  3.5175879
##   1:0:0:1:1:0     2  1.0050251
##   1:0:1:1:0:0     3  1.5075377
##   1:0:1:1:1:0     2  1.0050251
##   1:1:0:0:0:0     3  1.5075377
##   1:1:0:0:1:0     2  1.0050251
##   1:1:0:1:0:0     4  2.0100503
##   1:1:0:1:1:0     3  1.5075377
##   1:1:1:1:0:0     3  1.5075377
##   1:1:1:1:1:1    19  9.5477387
```

###SI CONSTRUCT

```
SIr.MD<-cbind(SIr1.num, SIr2.num, SIr3.num,SIr.score)
SI.missing<-aggr(SIr.MD)
```

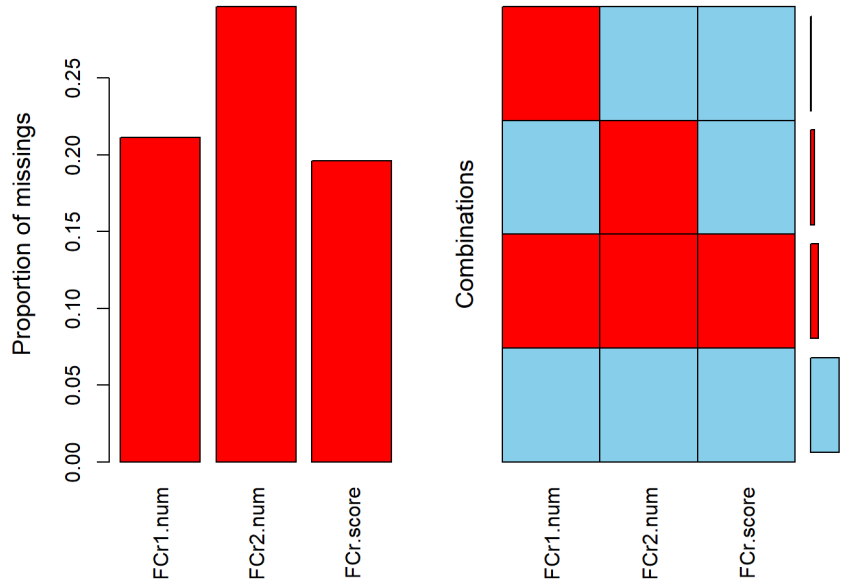



```
summary(SI.missing)
```

```
##
##  Missings per variable:
##   Variable Count
##   SIr1.num    46
##   SIr2.num    36
##   SIr3.num    47
##  SIr.score    25
##
##  Missings in combinations of variables:
##  Combinations Count    Percent
##       0:0:0:0   134 67.3366834
##       0:0:1:0    16  8.0402010
##       0:1:0:0     2  1.0050251
##       0:1:1:0     1  0.5025126
##       1:0:0:0     8  4.0201005
##       1:0:1:0     5  2.5125628
##       1:1:0:0     8  4.0201005
##       1:1:1:1    25 12.5628141
```

###FC CONSTRUCT

```
FCr.MD<-cbind(FCr1.num, FCr2.num, FCr.score)
FC.missing<-aggr(FCr.MD)
```

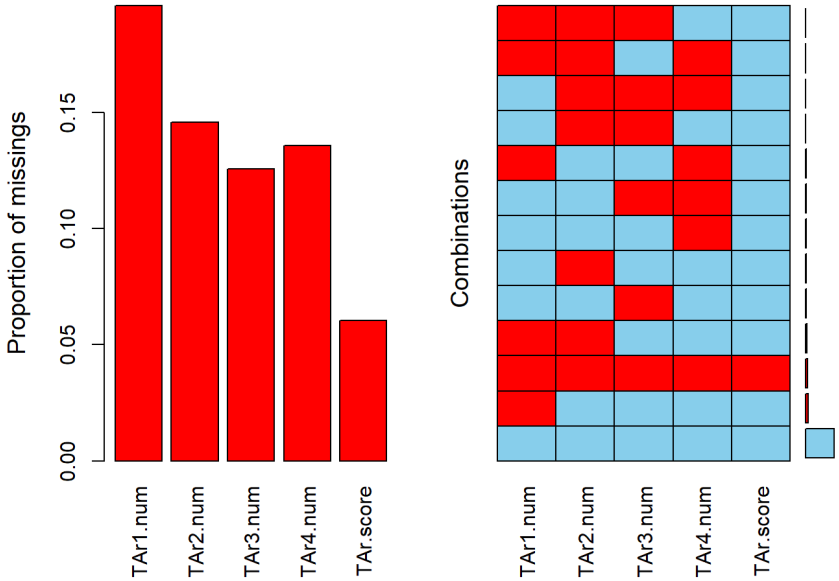



```
summary(FC.missing)
```

```
##
##  Missings per variable:
##   Variable Count
##   FCr1.num    42
##   FCr2.num    59
##  FCr.score    39
##
##  Missings in combinations of variables:
##  Combinations Count   Percent
##         0:0:0   137 68.844221
##         0:1:0    20 10.050251
##         1:0:0     3  1.507538
##         1:1:1    39 19.597990
```

###TA CONSTRUCT

```
TAr.MD<-cbind(TAr1.num, TAr2.num, TAr3.num, TAr4.num,TAr.score)
TA.missing<-aggr(TAr.MD)
```

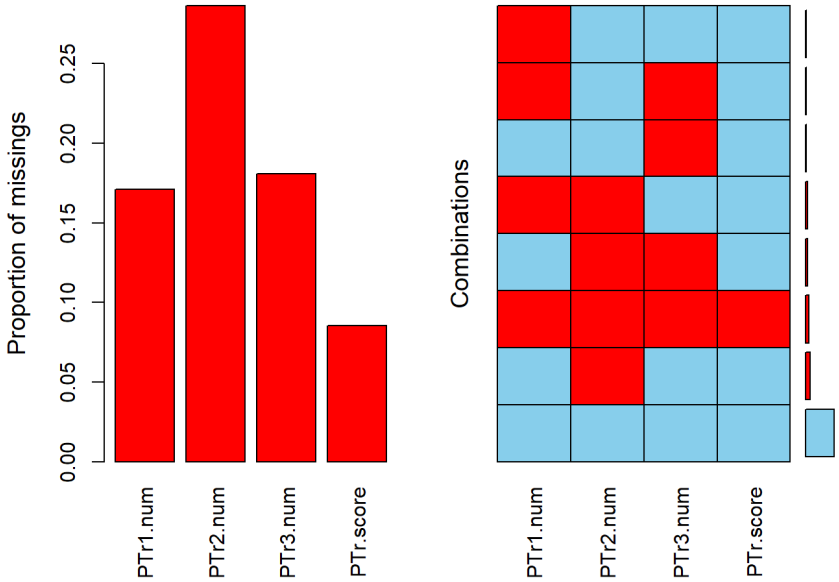



```
summary(TA.missing)
```

```
##
##  Missings per variable:
##   Variable Count
##   TAr1.num    39
##   TAr2.num    29
##   TAr3.num    25
##   TAr4.num    27
##  TAr.score    12
##
##  Missings in combinations of variables:
##  Combinations Count    Percent
##     0:0:0:0:0   137 68.8442211
##     0:0:0:1:0     5  2.5125628
##     0:0:1:0:0     6  3.0150754
##     0:0:1:1:0     4  2.0100503
##     0:1:0:0:0     6  3.0150754
##     0:1:1:0:0     1  0.5025126
##     0:1:1:1:0     1  0.5025126
##     1:0:0:0:0    14  7.0351759
##     1:0:0:1:0     4  2.0100503
##     1:1:0:0:0     7  3.5175879
##     1:1:0:1:0     1  0.5025126
##     1:1:1:0:0     1  0.5025126
##     1:1:1:1:1    12  6.0301508
```

###PT CONSTRUCT

```
PTr.MD<-cbind(PTr1.num, PTr2.num, PTr3.num,PTr.score)
PT.missing<-aggr(PTr.MD)
```

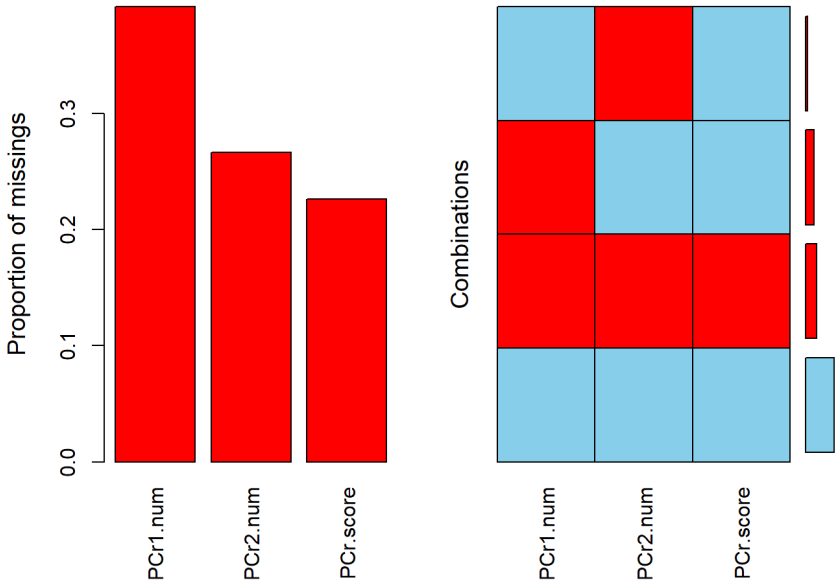



```
summary(PT.missing)
```

```
##
##  Missings per variable:
##   Variable Count
##   PTr1.num    34
##   PTr2.num    57
##   PTr3.num    36
##  PTr.score    17
##
##  Missings in combinations of variables:
##  Combinations Count   Percent
##       0:0:0:0   129 64.824121
##       0:0:1:0     5  2.512563
##       0:1:0:0    22 11.055276
##       0:1:1:0     9  4.522613
##       1:0:0:0     3  1.507538
##       1:0:1:0     5  2.512563
##       1:1:0:0     9  4.522613
##       1:1:1:1    17  8.542714
```

###PC CONSTRUCT

```
PCr.MD<-cbind(PCr1.num, PCr2.num,PCr.score)
PC.missing<-aggr(PCr.MD)
```

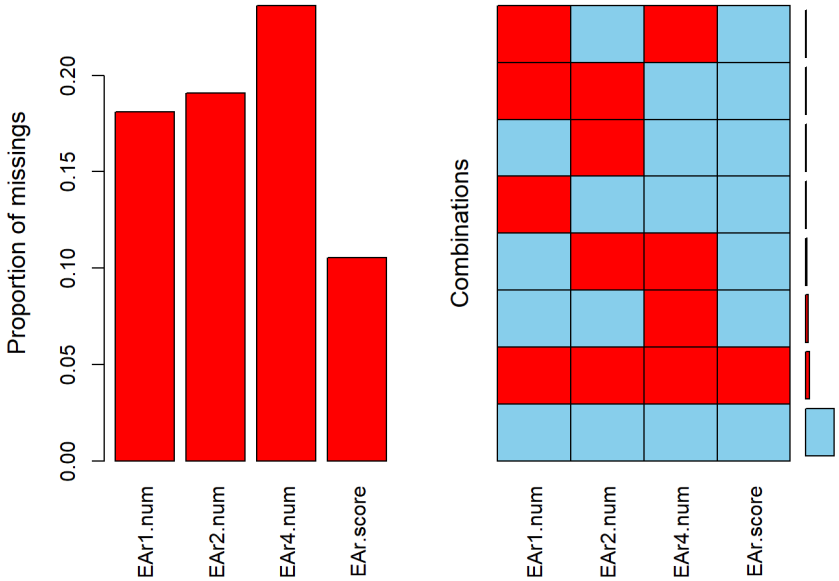



```
summary(PC.missing)
```

```
##
##  Missings per variable:
##   Variable Count
##   PCr1.num    78
##   PCr2.num    53
##  PCr.score    45
##
##  Missings in combinations of variables:
##  Combinations Count   Percent
##         0:0:0   113 56.783920
##         0:1:0     8  4.020101
##         1:0:0    33 16.582915
##         1:1:1    45 22.613065
```

###EA CONSTRUCT

```
EAr.MD<-cbind(EAr1.num, EAr2.num, EAr4.num,EAr.score)
EA.missing<-aggr(EAr.MD)
```

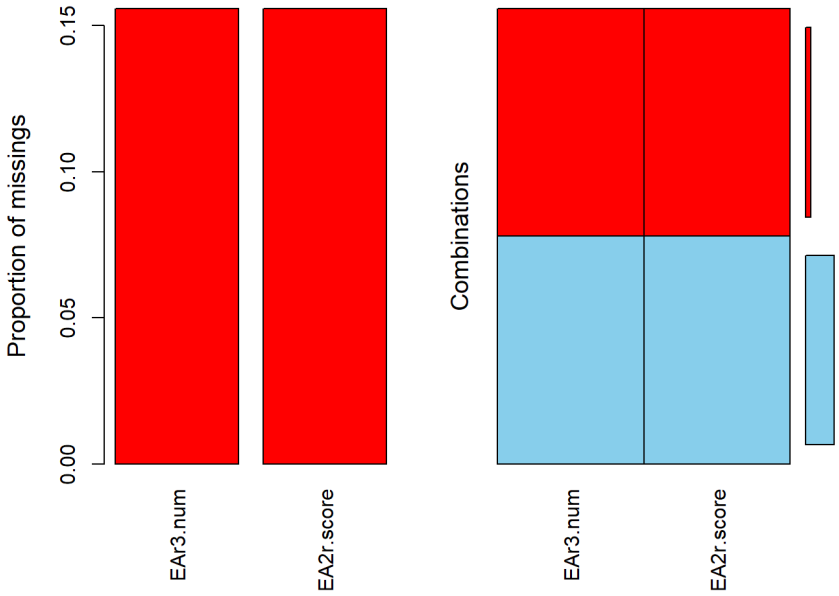



```
summary(EA.missing)
```

```
##
##  Missings per variable:
##   Variable Count
##   EAr1.num    36
##   EAr2.num    38
##   EAr4.num    47
##  EAr.score    21
##
##  Missings in combinations of variables:
##  Combinations Count   Percent
##       0:0:0:0   136 68.341709
##       0:0:1:0    15  7.537688
##       0:1:0:0     5  2.512563
##       0:1:1:0     7  3.517588
##       1:0:0:0     6  3.015075
##       1:0:1:0     4  2.010050
##       1:1:0:0     5  2.512563
##       1:1:1:1    21 10.552764
```

###EA2 CONSTRUCT

```
EA2r.MD<-cbind(EAr3.num,EA2r.score)
EA2.missing<-aggr(EA2r.MD)
```

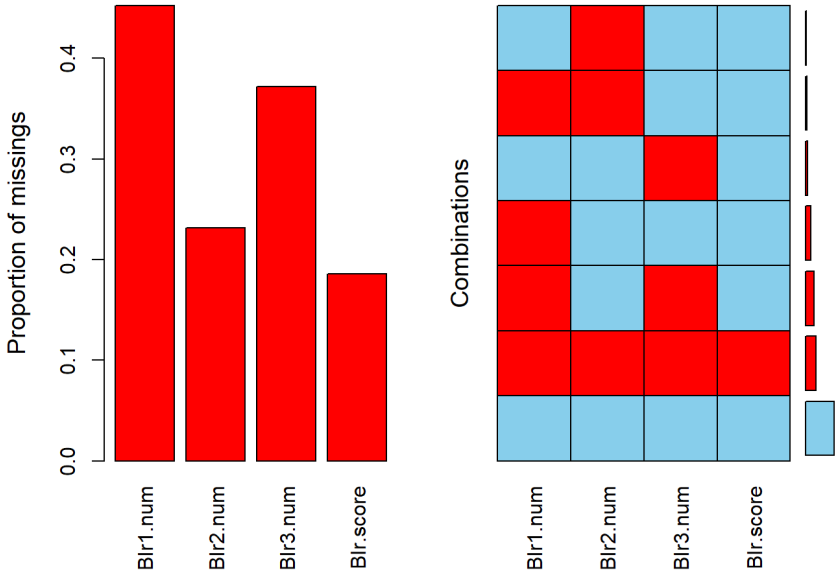



```
summary(EA2.missing)
```

```
##
##  Missings per variable:
##    Variable Count
##    EAr3.num    31
##  EA2r.score    31
##
##  Missings in combinations of variables:
##  Combinations Count  Percent
##           0:0   168 84.42211
##           1:1    31 15.57789
```

###BI CONSTRUCT

```
BIr.MD<-cbind(BIr1.num, BIr2.num, BIr3.num, BIr.score)
BI.missing<-aggr(BIr.MD)
```




```
summary(BI.missing)
```

```
##
##  Missings per variable:
##   Variable Count
##   BIr1.num    90
##   BIr2.num    46
##   BIr3.num    74
##  BIr.score    37
##
##  Missings in combinations of variables:
##  Combinations Count   Percent
##       0:0:0:0    98 49.246231
##       0:0:1:0     8  4.020101
##       0:1:0:0     3  1.507538
##       1:0:0:0    18  9.045226
##       1:0:1:0    29 14.572864
##       1:1:0:0     6  3.015075
##       1:1:1:1    37 18.592965
```

#Within each construct, we compared the demographic & AI-related variables between people with missing (mean) construct scores versus those with no missing (mean) construct scores

##The purpose of this was to see if there was any differences between those with no missing vs. those with missing (mean) construct scores. If there was any noteworthy difference, then we would consider imputing the missing data.

##Based on the codes below, it appears that there isn't any noteworthy differences in demographics between the two groups (within each construct), so no imputation for missing values were conducted.

###PE CONSTRUCT

```
PEr.score.missing<-factor(is.na(PEr.score),labels=c("No missing construct score","Missing construct score"))
PE.assess.MD<-cbind(ELIG.variRNC2,PEr.score.missing)

table1(~`Age`+ `Gender`+ `Education`+
       `Employment`+ `Family caregivers past AI experience`+
       `Family caregivers' knowledge about AI`|PEr.score.missing,data=PE.assess.MD)
```

	No missing construct score (N=177)	Missing construct score (N=22)	Overall (N=199)
Age			
Mean (SD)	56.4 (5.53)	58.7 (4.77)	56.7 (5.49)
Median [Min, Max]	57.0 [45.0, 64.0]	60.0 [46.0, 64.0]	57.0 [45.0, 64.0]
Gender			
Woman	116 (65.5%)	12 (54.5%)	128 (64.3%)
Man	61 (34.5%)	10 (45.5%)	71 (35.7%)
Education			
Elementary	1 (0.6%)	0 (0%)	1 (0.5%)
High school	37 (20.9%)	7 (31.8%)	44 (22.1%)
College / CEGEP	74 (41.8%)	8 (36.4%)	82 (41.2%)
Undergraduate	44 (24.9%)	4 (18.2%)	48 (24.1%)
Post-graduate (e.g., Masters, Ph.D.)	19 (10.7%)	3 (13.6%)	22 (11.1%)
Other, please specify	2 (1.1%)	0 (0%)	2 (1.0%)
Employment			
Full-time	81 (45.8%)	7 (31.8%)	88 (44.2%)
Part-time	20 (11.3%)	3 (13.6%)	23 (11.6%)
Unemployed	13 (7.3%)	2 (9.1%)	15 (7.5%)
Retired	57 (32.2%)	8 (36.4%)	65 (32.7%)
Full-time caregiver	2 (1.1%)	0 (0%)	2 (1.0%)
Other, please specify	4 (2.3%)	2 (9.1%)	6 (3.0%)
Family caregivers past AI experience			
Yes	15 (8.5%)	1 (4.5%)	16 (8.0%)
No	162 (91.5%)	21 (95.5%)	183 (92.0%)
Family caregivers' knowledge about AI			
Not knowledgeable	96 (54.2%)	13 (59.1%)	109 (54.8%)
Somewhat knowledgeable	42 (23.7%)	4 (18.2%)	46 (23.1%)
Moderately knowledgeable	33 (18.6%)	4 (18.2%)	37 (18.6%)
Extremely knowledgeable	5 (2.8%)	1 (4.5%)	6 (3.0%)
Missing	1 (0.6%)	0 (0%)	1 (0.5%)

###EE CONSTRUCT

```
EEr.score.missing<-factor(is.na(EEr.score),labels=c("No missing construct score","Missing construct score"))
EE.assess.MD<-cbind(ELIG.variRNC2,EEr.score.missing)

table1(~`Age`+ `Gender`+ `Education`+
         `Employment`+ `Family caregivers past AI experience`+
         `Family caregivers' knowledge about AI`|EEr.score.missing,data=EE.assess.MD)
```

	No missing construct score (N=180)	Missing construct score (N=19)	Overall (N=199)
Age			
Mean (SD)	56.5 (5.53)	58.3 (4.94)	56.7 (5.49)
Median [Min, Max]	57.0 [45.0, 64.0]	59.0 [46.0, 64.0]	57.0 [45.0, 64.0]
Gender			
Woman	115 (63.9%)	13 (68.4%)	128 (64.3%)
Man	65 (36.1%)	6 (31.6%)	71 (35.7%)
Education			
Elementary	1 (0.6%)	0 (0%)	1 (0.5%)
High school	38 (21.1%)	6 (31.6%)	44 (22.1%)
College / CEGEP	75 (41.7%)	7 (36.8%)	82 (41.2%)
Undergraduate	44 (24.4%)	4 (21.1%)	48 (24.1%)
Post-graduate (e.g., Masters, Ph.D.)	20 (11.1%)	2 (10.5%)	22 (11.1%)
Other, please specify	2 (1.1%)	0 (0%)	2 (1.0%)
Employment			
Full-time	84 (46.7%)	4 (21.1%)	88 (44.2%)
Part-time	18 (10.0%)	5 (26.3%)	23 (11.6%)
Unemployed	13 (7.2%)	2 (10.5%)	15 (7.5%)
Retired	59 (32.8%)	6 (31.6%)	65 (32.7%)
Full-time caregiver	2 (1.1%)	0 (0%)	2 (1.0%)
Other, please specify	4 (2.2%)	2 (10.5%)	6 (3.0%)
Family caregivers past AI experience			
Yes	15 (8.3%)	1 (5.3%)	16 (8.0%)
No	165 (91.7%)	18 (94.7%)	183 (92.0%)
Family caregivers' knowledge about AI			
Not knowledgeable	97 (53.9%)	12 (63.2%)	109 (54.8%)
Somewhat knowledgeable	43 (23.9%)	3 (15.8%)	46 (23.1%)
Moderately knowledgeable	33 (18.3%)	4 (21.1%)	37 (18.6%)
Extremely knowledgeable	6 (3.3%)	0 (0%)	6 (3.0%)
Missing	1 (0.6%)	0 (0%)	1 (0.5%)

###SI CONSTRUCT

```
SIr.score.missing<-factor(is.na(SIr.score),labels=c("No missing construct score","Missing construct score"))
SI.assess.MD<-cbind(ELIG.variRNC2,SIr.score.missing)

table1(~`Age`+ `Gender`+ `Education`+
         `Employment`+ `Family caregivers past AI experience`+
         `Family caregivers' knowledge about AI`|SIr.score.missing,data=SI.assess.MD)
```

	No missing construct score (N=174)	Missing construct score (N=25)	Overall (N=199)
Age			
Mean (SD)	56.2 (5.51)	60.0 (4.05)	56.7 (5.49)
Median [Min, Max]	57.0 [45.0, 64.0]	61.0 [49.0, 64.0]	57.0 [45.0, 64.0]
Gender			
Woman	112 (64.4%)	16 (64.0%)	128 (64.3%)
Man	62 (35.6%)	9 (36.0%)	71 (35.7%)
Education			
Elementary	1 (0.6%)	0 (0%)	1 (0.5%)
High school	35 (20.1%)	9 (36.0%)	44 (22.1%)
College / CEGEP	72 (41.4%)	10 (40.0%)	82 (41.2%)
Undergraduate	42 (24.1%)	6 (24.0%)	48 (24.1%)
Post-graduate (e.g., Masters, Ph.D.)	22 (12.6%)	0 (0%)	22 (11.1%)
Other, please specify	2 (1.1%)	0 (0%)	2 (1.0%)
Employment			
Full-time	79 (45.4%)	9 (36.0%)	88 (44.2%)
Part-time	20 (11.5%)	3 (12.0%)	23 (11.6%)
Unemployed	12 (6.9%)	3 (12.0%)	15 (7.5%)

	No missing construct score (N=174)	Missing construct score (N=25)	Overall (N=199)
Retired	56 (32.2%)	9 (36.0%)	65 (32.7%)
Full-time caregiver	2 (1.1%)	0 (0%)	2 (1.0%)
Other, please specify	5 (2.9%)	1 (4.0%)	6 (3.0%)
Family caregivers past AI experience			
Yes	15 (8.6%)	1 (4.0%)	16 (8.0%)
No	159 (91.4%)	24 (96.0%)	183 (92.0%)
Family caregivers' knowledge about AI			
Not knowledgeable	95 (54.6%)	14 (56.0%)	109 (54.8%)
Somewhat knowledgeable	41 (23.6%)	5 (20.0%)	46 (23.1%)
Moderately knowledgeable	31 (17.8%)	6 (24.0%)	37 (18.6%)
Extremely knowledgeable	6 (3.4%)	0 (0%)	6 (3.0%)
Missing	1 (0.6%)	0 (0%)	1 (0.5%)

###FC CONSTRUCT

```
FCr.score.missing<-factor(is.na(FCr.score),labels=c("No missing construct score","Missing construct score"))
FC.assess.MD<-cbind(ELIG.variRNC2,FCr.score.missing)

table1(~`Age`+ `Gender`+ `Education`+
         `Employment`+ `Family caregivers past AI experience`+
         `Family caregivers' knowledge about AI`|FCr.score.missing,data=FC.assess.MD)
```

	No missing construct score (N=160)	Missing construct score (N=39)	Overall (N=199)
Age			
Mean (SD)	56.2 (5.59)	58.7 (4.61)	56.7 (5.49)
Median [Min, Max]	57.0 [45.0, 64.0]	60.0 [46.0, 64.0]	57.0 [45.0, 64.0]
Gender			
Woman	101 (63.1%)	27 (69.2%)	128 (64.3%)
Man	59 (36.9%)	12 (30.8%)	71 (35.7%)
Education			
Elementary	1 (0.6%)	0 (0%)	1 (0.5%)
High school	34 (21.3%)	10 (25.6%)	44 (22.1%)
College / CEGEP	65 (40.6%)	17 (43.6%)	82 (41.2%)
Undergraduate	40 (25.0%)	8 (20.5%)	48 (24.1%)
Post-graduate (e.g., Masters, Ph.D.)	18 (11.3%)	4 (10.3%)	22 (11.1%)
Other, please specify	2 (1.3%)	0 (0%)	2 (1.0%)
Employment			
Full-time	74 (46.3%)	14 (35.9%)	88 (44.2%)
Part-time	18 (11.3%)	5 (12.8%)	23 (11.6%)
Unemployed	12 (7.5%)	3 (7.7%)	15 (7.5%)
Retired	51 (31.9%)	14 (35.9%)	65 (32.7%)
Full-time caregiver	2 (1.3%)	0 (0%)	2 (1.0%)
Other, please specify	3 (1.9%)	3 (7.7%)	6 (3.0%)
Family caregivers past AI experience			
Yes	14 (8.8%)	2 (5.1%)	16 (8.0%)
No	146 (91.3%)	37 (94.9%)	183 (92.0%)
Family caregivers' knowledge about AI			
Not knowledgeable	89 (55.6%)	20 (51.3%)	109 (54.8%)
Somewhat knowledgeable	38 (23.8%)	8 (20.5%)	46 (23.1%)
Moderately knowledgeable	27 (16.9%)	10 (25.6%)	37 (18.6%)
Extremely knowledgeable	6 (3.8%)	0 (0%)	6 (3.0%)
Missing	0 (0%)	1 (2.6%)	1 (0.5%)

###TA CONSTRUCT

```
TAr.score.missing<-factor(is.na(TAr.score),labels=c("No missing construct score","Missing construct score"))
TA.assess.MD<-cbind(ELIG.variRNC2,TAr.score.missing)

table1(~`Age`+ `Gender`+ `Education`+
         `Employment`+ `Family caregivers past AI experience`+
         `Family caregivers' knowledge about AI`|TAr.score.missing,data=TA.assess.MD)
```

	No missing construct score (N=187)	Missing construct score (N=12)	Overall (N=199)
Age			
Mean (SD)	56.6 (5.49)	57.5 (5.65)	56.7 (5.49)

	No missing construct score (N=187)	Missing construct score (N=12)	Overall (N=199)
Median [Min, Max]	57.0 [45.0, 64.0]	59.0 [46.0, 64.0]	57.0 [45.0, 64.0]
Gender			
Woman	120 (64.2%)	8 (66.7%)	128 (64.3%)
Man	67 (35.8%)	4 (33.3%)	71 (35.7%)
Education			
Elementary	1 (0.5%)	0 (0%)	1 (0.5%)
High school	41 (21.9%)	3 (25.0%)	44 (22.1%)
College / CEGEP	78 (41.7%)	4 (33.3%)	82 (41.2%)
Undergraduate	44 (23.5%)	4 (33.3%)	48 (24.1%)
Post-graduate (e.g., Masters, Ph.D.)	21 (11.2%)	1 (8.3%)	22 (11.1%)
Other, please specify	2 (1.1%)	0 (0%)	2 (1.0%)
Employment			
Full-time	84 (44.9%)	4 (33.3%)	88 (44.2%)
Part-time	20 (10.7%)	3 (25.0%)	23 (11.6%)
Unemployed	14 (7.5%)	1 (8.3%)	15 (7.5%)
Retired	62 (33.2%)	3 (25.0%)	65 (32.7%)
Full-time caregiver	2 (1.1%)	0 (0%)	2 (1.0%)
Other, please specify	5 (2.7%)	1 (8.3%)	6 (3.0%)
Family caregivers past AI experience			
Yes	15 (8.0%)	1 (8.3%)	16 (8.0%)
No	172 (92.0%)	11 (91.7%)	183 (92.0%)
Family caregivers' knowledge about AI			
Not knowledgeable	101 (54.0%)	8 (66.7%)	109 (54.8%)
Somewhat knowledgeable	45 (24.1%)	1 (8.3%)	46 (23.1%)
Moderately knowledgeable	34 (18.2%)	3 (25.0%)	37 (18.6%)
Extremely knowledgeable	6 (3.2%)	0 (0%)	6 (3.0%)
Missing	1 (0.5%)	0 (0%)	1 (0.5%)

###PT CONSTRUCT

```
PTr.score.missing<-factor(is.na(PTr.score),labels=c("No missing construct score","Missing construct score"))
PT.assess.MD<-cbind(ELIG.variRNC2,PTr.score.missing)

table1(~`Age`+ `Gender`+ `Education`+
         `Employment`+ `Family caregivers past AI experience`+
         `Family caregivers' knowledge about AI`|PTr.score.missing,data=PT.assess.MD)
```

	No missing construct score (N=182)	Missing construct score (N=17)	Overall (N=199)
Age			
Mean (SD)	56.4 (5.53)	59.7 (4.01)	56.7 (5.49)
Median [Min, Max]	57.0 [45.0, 64.0]	60.0 [49.0, 64.0]	57.0 [45.0, 64.0]
Gender			
Woman	117 (64.3%)	11 (64.7%)	128 (64.3%)
Man	65 (35.7%)	6 (35.3%)	71 (35.7%)
Education			
Elementary	1 (0.5%)	0 (0%)	1 (0.5%)
High school	38 (20.9%)	6 (35.3%)	44 (22.1%)
College / CEGEP	76 (41.8%)	6 (35.3%)	82 (41.2%)
Undergraduate	43 (23.6%)	5 (29.4%)	48 (24.1%)
Post-graduate (e.g., Masters, Ph.D.)	22 (12.1%)	0 (0%)	22 (11.1%)
Other, please specify	2 (1.1%)	0 (0%)	2 (1.0%)
Employment			
Full-time	82 (45.1%)	6 (35.3%)	88 (44.2%)
Part-time	19 (10.4%)	4 (23.5%)	23 (11.6%)
Unemployed	14 (7.7%)	1 (5.9%)	15 (7.5%)
Retired	59 (32.4%)	6 (35.3%)	65 (32.7%)
Full-time caregiver	2 (1.1%)	0 (0%)	2 (1.0%)
Other, please specify	6 (3.3%)	0 (0%)	6 (3.0%)
Family caregivers past AI experience			
Yes	15 (8.2%)	1 (5.9%)	16 (8.0%)
No	167 (91.8%)	16 (94.1%)	183 (92.0%)
Family caregivers' knowledge about AI			
Not knowledgeable	98 (53.8%)	11 (64.7%)	109 (54.8%)

	No missing construct score (N=182)	Missing construct score (N=17)	Overall (N=199)
Somewhat knowledgeable	43 (23.6%)	3 (17.6%)	46 (23.1%)
Moderately knowledgeable	34 (18.7%)	3 (17.6%)	37 (18.6%)
Extremely knowledgeable	6 (3.3%)	0 (0%)	6 (3.0%)
Missing	1 (0.5%)	0 (0%)	1 (0.5%)

###PC CONSTRUCT

```
PCr.score.missing<-factor(is.na(PCr.score),labels=c("No missing construct score","Missing construct score"))
PC.assess.MD<-cbind(ELIG.variRNC2,PCr.score.missing)

table1(~`Age`+ `Gender`+ `Education`+
         `Employment`+ `Family caregivers past AI experience`+
         `Family caregivers' knowledge about AI`|PCr.score.missing,data=PC.assess.MD)
```

	No missing construct score (N=154)	Missing construct score (N=45)	Overall (N=199)
Age			
Mean (SD)	56.2 (5.61)	58.4 (4.73)	56.7 (5.49)
Median [Min, Max]	57.0 [45.0, 64.0]	59.0 [46.0, 64.0]	57.0 [45.0, 64.0]
Gender			
Woman	97 (63.0%)	31 (68.9%)	128 (64.3%)
Man	57 (37.0%)	14 (31.1%)	71 (35.7%)
Education			
Elementary	0 (0%)	1 (2.2%)	1 (0.5%)
High school	29 (18.8%)	15 (33.3%)	44 (22.1%)
College / CEGEP	69 (44.8%)	13 (28.9%)	82 (41.2%)
Undergraduate	37 (24.0%)	11 (24.4%)	48 (24.1%)
Post-graduate (e.g., Masters, Ph.D.)	18 (11.7%)	4 (8.9%)	22 (11.1%)
Other, please specify	1 (0.6%)	1 (2.2%)	2 (1.0%)
Employment			
Full-time	73 (47.4%)	15 (33.3%)	88 (44.2%)
Part-time	16 (10.4%)	7 (15.6%)	23 (11.6%)
Unemployed	11 (7.1%)	4 (8.9%)	15 (7.5%)
Retired	49 (31.8%)	16 (35.6%)	65 (32.7%)
Full-time caregiver	2 (1.3%)	0 (0%)	2 (1.0%)
Other, please specify	3 (1.9%)	3 (6.7%)	6 (3.0%)
Family caregivers past AI experience			
Yes	15 (9.7%)	1 (2.2%)	16 (8.0%)
No	139 (90.3%)	44 (97.8%)	183 (92.0%)
Family caregivers' knowledge about AI			
Not knowledgeable	81 (52.6%)	28 (62.2%)	109 (54.8%)
Somewhat knowledgeable	39 (25.3%)	7 (15.6%)	46 (23.1%)
Moderately knowledgeable	28 (18.2%)	9 (20.0%)	37 (18.6%)
Extremely knowledgeable	5 (3.2%)	1 (2.2%)	6 (3.0%)
Missing	1 (0.6%)	0 (0%)	1 (0.5%)

###EA CONSTRUCT

```
EAr.score.missing<-factor(is.na(EAr.score),labels=c("No missing construct score","Missing construct score"))
EA.assess.MD<-cbind(ELIG.variRNC2,EAr.score.missing)

table1(~`Age`+ `Gender`+ `Education`+
         `Employment`+ `Family caregivers past AI experience`+
         `Family caregivers' knowledge about AI`|EAr.score.missing,data=EA.assess.MD)
```

	No missing construct score (N=178)	Missing construct score (N=21)	Overall (N=199)
Age			
Mean (SD)	56.5 (5.59)	58.0 (4.50)	56.7 (5.49)
Median [Min, Max]	57.0 [45.0, 64.0]	59.0 [49.0, 64.0]	57.0 [45.0, 64.0]
Gender			
Woman	114 (64.0%)	14 (66.7%)	128 (64.3%)
Man	64 (36.0%)	7 (33.3%)	71 (35.7%)
Education			
Elementary	1 (0.6%)	0 (0%)	1 (0.5%)
High school	40 (22.5%)	4 (19.0%)	44 (22.1%)
College / CEGEP	71 (39.9%)	11 (52.4%)	82 (41.2%)

	No missing construct score (N=178)	Missing construct score (N=21)	Overall (N=199)
Undergraduate	44 (24.7%)	4 (19.0%)	48 (24.1%)
Post-graduate (e.g., Masters, Ph.D.)	20 (11.2%)	2 (9.5%)	22 (11.1%)
Other, please specify	2 (1.1%)	0 (0%)	2 (1.0%)
Employment			
Full-time	81 (45.5%)	7 (33.3%)	88 (44.2%)
Part-time	17 (9.6%)	6 (28.6%)	23 (11.6%)
Unemployed	12 (6.7%)	3 (14.3%)	15 (7.5%)
Retired	60 (33.7%)	5 (23.8%)	65 (32.7%)
Full-time caregiver	2 (1.1%)	0 (0%)	2 (1.0%)
Other, please specify	6 (3.4%)	0 (0%)	6 (3.0%)
Family caregivers past AI experience			
Yes	14 (7.9%)	2 (9.5%)	16 (8.0%)
No	164 (92.1%)	19 (90.5%)	183 (92.0%)
Family caregivers' knowledge about AI			
Not knowledgeable	97 (54.5%)	12 (57.1%)	109 (54.8%)
Somewhat knowledgeable	39 (21.9%)	7 (33.3%)	46 (23.1%)
Moderately knowledgeable	35 (19.7%)	2 (9.5%)	37 (18.6%)
Extremely knowledgeable	6 (3.4%)	0 (0%)	6 (3.0%)
Missing	1 (0.6%)	0 (0%)	1 (0.5%)

#EA2 CONSTRUCT

```
EA2r.score.missing<-factor (is.na(EA2r.score),labels=c("No missing construct score","Missing construct score"))
table(EA2r.score.missing)
```

```
## EA2r.score.missing
## No missing construct score    Missing construct score
##                        168                         31
```

```
EA2.assess.MD<-cbind(ELIG.variRNC2,EA2r.score.missing)

table1(~`Age`+ `Gender`+ `Education`+
         `Employment`+ `Family caregivers past AI experience`+
         `Family caregivers' knowledge about AI`|EA2r.score.missing,data=EA2.assess.MD)
```

	No missing construct score (N=168)	Missing construct score (N=31)	Overall (N=199)
Age			
Mean (SD)	56.4 (5.48)	58.1 (5.44)	56.7 (5.49)
Median [Min, Max]	57.0 [45.0, 64.0]	59.0 [46.0, 64.0]	57.0 [45.0, 64.0]
Gender			
Woman	106 (63.1%)	22 (71.0%)	128 (64.3%)
Man	62 (36.9%)	9 (29.0%)	71 (35.7%)
Education			
Elementary	1 (0.6%)	0 (0%)	1 (0.5%)
High school	36 (21.4%)	8 (25.8%)	44 (22.1%)
College / CEGEP	71 (42.3%)	11 (35.5%)	82 (41.2%)
Undergraduate	41 (24.4%)	7 (22.6%)	48 (24.1%)
Post-graduate (e.g., Masters, Ph.D.)	17 (10.1%)	5 (16.1%)	22 (11.1%)
Other, please specify	2 (1.2%)	0 (0%)	2 (1.0%)
Employment			
Full-time	78 (46.4%)	10 (32.3%)	88 (44.2%)
Part-time	18 (10.7%)	5 (16.1%)	23 (11.6%)
Unemployed	10 (6.0%)	5 (16.1%)	15 (7.5%)
Retired	56 (33.3%)	9 (29.0%)	65 (32.7%)
Full-time caregiver	2 (1.2%)	0 (0%)	2 (1.0%)
Other, please specify	4 (2.4%)	2 (6.5%)	6 (3.0%)
Family caregivers past AI experience			
Yes	15 (8.9%)	1 (3.2%)	16 (8.0%)
No	153 (91.1%)	30 (96.8%)	183 (92.0%)
Family caregivers' knowledge about AI			
Not knowledgeable	91 (54.2%)	18 (58.1%)	109 (54.8%)
Somewhat knowledgeable	41 (24.4%)	5 (16.1%)	46 (23.1%)
Moderately knowledgeable	29 (17.3%)	8 (25.8%)	37 (18.6%)
Extremely knowledgeable	6 (3.6%)	0 (0%)	6 (3.0%)

	No missing construct score (N=168)	Missing construct score (N=31)	Overall (N=199)
Missing	1 (0.6%)	0 (0%)	1 (0.5%)

###BI CONSTRUCT

```
BIr.score.missing<-factor(is.na(BIr.score),labels=c("No missing construct score","Missing construct score"))
BI.assess.MD<-cbind(ELIG.variRNC2,BIr.score.missing)

table1(~`Age`+ `Gender`+ `Education`+
         `Employment`+ `Family caregivers past AI experience`+
         `Family caregivers' knowledge about AI`|BIr.score.missing,data=BI.assess.MD)
```

	No missing construct score (N=162)	Missing construct score (N=37)	Overall (N=199)
Age			
Mean (SD)	56.3 (5.57)	58.4 (4.80)	56.7 (5.49)
Median [Min, Max]	57.0 [45.0, 64.0]	60.0 [46.0, 64.0]	57.0 [45.0, 64.0]
Gender			
Woman	101 (62.3%)	27 (73.0%)	128 (64.3%)
Man	61 (37.7%)	10 (27.0%)	71 (35.7%)
Education			
Elementary	1 (0.6%)	0 (0%)	1 (0.5%)
High school	33 (20.4%)	11 (29.7%)	44 (22.1%)
College / CEGEP	71 (43.8%)	11 (29.7%)	82 (41.2%)
Undergraduate	37 (22.8%)	11 (29.7%)	48 (24.1%)
Post-graduate (e.g., Masters, Ph.D.)	19 (11.7%)	3 (8.1%)	22 (11.1%)
Other, please specify	1 (0.6%)	1 (2.7%)	2 (1.0%)
Employment			
Full-time	73 (45.1%)	15 (40.5%)	88 (44.2%)
Part-time	18 (11.1%)	5 (13.5%)	23 (11.6%)
Unemployed	12 (7.4%)	3 (8.1%)	15 (7.5%)
Retired	54 (33.3%)	11 (29.7%)	65 (32.7%)
Full-time caregiver	2 (1.2%)	0 (0%)	2 (1.0%)
Other, please specify	3 (1.9%)	3 (8.1%)	6 (3.0%)
Family caregivers past AI experience			
Yes	14 (8.6%)	2 (5.4%)	16 (8.0%)
No	148 (91.4%)	35 (94.6%)	183 (92.0%)
Family caregivers' knowledge about AI			
Not knowledgeable	86 (53.1%)	23 (62.2%)	109 (54.8%)
Somewhat knowledgeable	40 (24.7%)	6 (16.2%)	46 (23.1%)
Moderately knowledgeable	30 (18.5%)	7 (18.9%)	37 (18.6%)
Extremely knowledgeable	5 (3.1%)	1 (2.7%)	6 (3.0%)
Missing	1 (0.6%)	0 (0%)	1 (0.5%)

#Created a table of demographic/caregiving/AI-related variables comparing the entire sample versus those who have full/competed data of their mean construct scores

```
all<-row.names(as.data.frame(Constructs.num))
no.miss<-row.names(na.omit(as.data.frame(Constructs.num)))


merge.data<-rbind(ELIG.variRNC2,ELIG.variRNC2[as.numeric(no.miss),])
group<-c(rep("All",199),rep("No missing data",115))
merge.data<-cbind(merge.data,group)
table1(~.|group,merge.data)
```

	All (N=199)	No missing data (N=115)
Survey's Language		
Français / French	173 (86.9%)	100 (87.0%)
English / Anglais	26 (13.1%)	15 (13.0%)
Age		
Mean (SD)	56.7 (5.49)	55.5 (5.77)
Median [Min, Max]	57.0 [45.0, 64.0]	56.0 [45.0, 64.0]
Gender		
Woman	128 (64.3%)	68 (59.1%)
Man	71 (35.7%)	47 (40.9%)
Education		

	All (N=199)	No missing data (N=115)
Elementary	1 (0.5%)	0 (0%)
High school	44 (22.1%)	22 (19.1%)
College / CEGEP	82 (41.2%)	48 (41.7%)
Undergraduate	48 (24.1%)	30 (26.1%)
Post-graduate (e.g., Masters, Ph.D.)	22 (11.1%)	14 (12.2%)
Other, please specify	2 (1.0%)	1 (0.9%)
Responses to Education		
	197 (99.0%)	114 (99.1%)
Cours technique	1 (0.5%)	0 (0%)
École de métier	1 (0.5%)	1 (0.9%)
Employment		
Full-time	88 (44.2%)	56 (48.7%)
Part-time	23 (11.6%)	13 (11.3%)
Unemployed	15 (7.5%)	6 (5.2%)
Retired	65 (32.7%)	37 (32.2%)
Full-time caregiver	2 (1.0%)	2 (1.7%)
Other, please specify	6 (3.0%)	1 (0.9%)
Responses to Employment		
	193 (97.0%)	114 (99.1%)
À la maison	1 (0.5%)	0 (0%)
Aidant Naturel	0 (0%)	0 (0%)
aidant naturel à temps plein	0 (0%)	0 (0%)
at home	1 (0.5%)	0 (0%)
Homemaker	1 (0.5%)	0 (0%)
Invalide	0 (0%)	0 (0%)
Retour aux études	0 (0%)	0 (0%)
Travailleur autonome	1 (0.5%)	1 (0.9%)
Travailleurs autonomes	1 (0.5%)	0 (0%)
travailleuse autonome	1 (0.5%)	0 (0%)
Years Lived in Canada		
Mean (SD)	55.3 (9.07)	54.4 (8.70)
Median [Min, Max]	57.0 [7.00, 64.0]	56.0 [15.0, 64.0]
Relationship to care recipient - child		
Child	140 (70.4%)	83 (72.2%)
NO TO: Child	59 (29.6%)	32 (27.8%)
Relationship to care recipient - grandchild		
Grandchild	2 (1.0%)	1 (0.9%)
NO TO: Grandchild	197 (99.0%)	114 (99.1%)
Relationship to care recipient - spouse		
Spouse	20 (10.1%)	10 (8.7%)
NO TO: Spouse	179 (89.9%)	105 (91.3%)
Relationship to care recipient - sibiling		
Sibling	14 (7.0%)	8 (7.0%)
NO TO: Sibling	185 (93.0%)	107 (93.0%)
Relationship to care recipient - friend		
Friend	12 (6.0%)	9 (7.8%)
NO TO: Friend	187 (94.0%)	106 (92.2%)
Relationship to care recipient - Neighbour		
Neighbour	1 (0.5%)	1 (0.9%)
NO TO: Neighbour	198 (99.5%)	114 (99.1%)
Relationship to care recipient - other		
Other, please specify	12 (6.0%)	5 (4.3%)
NO TO: Other, please specify	187 (94.0%)	110 (95.7%)
Responses to relationship to care recipient		
	187 (94.0%)	110 (95.7%)
beau frere	1 (0.5%)	1 (0.9%)
beau père	1 (0.5%)	0 (0%)
Belle-mere	1 (0.5%)	0 (0%)
Belle-mère	3 (1.5%)	1 (0.9%)
belle-mère et beau-père	1 (0.5%)	0 (0%)

	All (N=199)	No missing data (N=115)
brother	0 (0%)	0 (0%)
Conjointe de fait	1 (0.5%)	0 (0%)
Daughter in law	1 (0.5%)	0 (0%)
father	0 (0%)	0 (0%)
gendre	1 (0.5%)	1 (0.9%)
Gendre	1 (0.5%)	1 (0.9%)
grand mère	0 (0%)	0 (0%)
ma mere	0 (0%)	0 (0%)
mere	0 (0%)	0 (0%)
Mere	0 (0%)	0 (0%)
mère	0 (0%)	0 (0%)
Mère	0 (0%)	0 (0%)
mother	0 (0%)	0 (0%)
Mother	0 (0%)	0 (0%)
parent	0 (0%)	0 (0%)
Parent	0 (0%)	0 (0%)
parents	0 (0%)	0 (0%)
Parents	0 (0%)	0 (0%)
Parents Père et Mere	0 (0%)	0 (0%)
pere	0 (0%)	0 (0%)
Pere	0 (0%)	0 (0%)
père	0 (0%)	0 (0%)
Père	0 (0%)	0 (0%)
Tante	1 (0.5%)	1 (0.9%)
une voisine	0 (0%)	0 (0%)
Living arrangement - living with the family caregiver		
Living with the family caregiver	68 (34.2%)	41 (35.7%)
NO TO: Living with the family caregiver	131 (65.8%)	74 (64.3%)
Living arrangement - living independently in one's own home		
Living independently in one's own home	83 (41.7%)	45 (39.1%)
NO TO: Living independently in one's own home	116 (58.3%)	70 (60.9%)
Living arrangement - living in long-term care/nursing home/residential home		
Living in long-term care/nursing home/residential home	45 (22.6%)	28 (24.3%)
NO TO: Living in long-term care/nursing home/residential home	154 (77.4%)	87 (75.7%)
Living arrangement - RPA or equivalent		
RPA or equivalent	8 (4.0%)	5 (4.3%)
NO TO: RPA or equivalent	191 (96.0%)	110 (95.7%)
Living arrangement - other		
Other, please specify	0 (0%)	0 (0%)
NO TO: Other, please specify	199 (100%)	115 (100%)
Responses to living arrangement		
	199 (100%)	115 (100%)
Elle vie avec sa soeur et moi je m'occupe d'elle aux besoin	0 (0%)	0 (0%)
Habitent dans logement loué de façon semi-Autonome	0 (0%)	0 (0%)
Living with another family member	0 (0%)	0 (0%)
Logement personnel dans une rpa	0 (0%)	0 (0%)
Logement semi autonome	0 (0%)	0 (0%)
RPA	0 (0%)	0 (0%)
RPA avec plusieurs services	0 (0%)	0 (0%)
RPA en milieu familial	0 (0%)	0 (0%)
RPA semi-autonome	0 (0%)	0 (0%)
Vit dans sa maison avec son mari	0 (0%)	0 (0%)
Number of older adults the family caregiver is caring for		
1	167 (83.9%)	98 (85.2%)
2	29 (14.6%)	15 (13.0%)
3	0 (0%)	0 (0%)
4 or more	2 (1.0%)	2 (1.7%)
Missing	1 (0.5%)	0 (0%)
Number of years the family caregiver has been a caregiver		
Mean (SD)	7.66 (6.94)	7.65 (7.44)

	All (N=199)	No missing data (N=115)
Median [Min, Max]	6.00 [0, 56.0]	6.00 [0, 56.0]
Estimated number of hours of care per week provided by the family caregiver		
Mean (SD)	16.1 (19.5)	17.1 (20.2)
Median [Min, Max]	10.0 [0, 168]	10.0 [0, 168]
Missing	1 (0.5%)	1 (0.9%)
Tasks family caregivers perform - Medical/nursing care		
Medical/nursing care (e.g., operating medical equipment like a catheter, providing wound care, assisting with medications/injections)	40 (20.1%)	25 (21.7%)
NO TO: Medical/nursing care (e.g., operating medical equipment like a catheter, providing wound care, assisting with medications/injections)	159 (79.9%)	90 (78.3%)
Tasks family caregivers perform - Care coordinator		
Care coordinator (e.g., communicate with healthcare providers, translator, schedule appointments)	127 (63.8%)	73 (63.5%)
NO TO: Care coordinator (e.g., communicate with healthcare providers, translator, schedule appointments)	72 (36.2%)	42 (36.5%)
Tasks family caregivers perform - Psychosocial care		
Psychosocial care (e.g., emotional support, companionship)	140 (70.4%)	83 (72.2%)
NO TO: Psychosocial care (e.g., emotional support, companionship)	59 (29.6%)	32 (27.8%)
Tasks family caregivers perform - Daily living activities		
Daily living activities (e.g., dressing, feeding, toileting, transferring)	70 (35.2%)	41 (35.7%)
NO TO: Daily living activities (e.g., dressing, feeding, toileting, transferring)	129 (64.8%)	74 (64.3%)
Tasks family caregivers perform - Household tasks		
Household tasks (e.g., home maintenance, grocery shopping, laundry)	142 (71.4%)	79 (68.7%)
NO TO: Household tasks (e.g., home maintenance, grocery shopping, laundry)	57 (28.6%)	36 (31.3%)
Tasks family caregivers perform - Transportation		
Transportation (e.g., driving the older adult to appointments)	133 (66.8%)	75 (65.2%)
NO TO: Transportation (e.g., driving the older adult to appointments)	66 (33.2%)	40 (34.8%)
Tasks family caregivers perform - Substitute decision-maker		
Substitute decision-maker (e.g., making health, legal and financial decisions on behalf of the older care recipient who is unable to)	87 (43.7%)	51 (44.3%)
NO TO: Substitute decision-maker (e.g., making health, legal and financial decisions on behalf of the older care recipient who is unable to)	112 (56.3%)	64 (55.7%)
Tasks family caregivers perform - Other		
Other, please specify	3 (1.5%)	3 (2.6%)
NO TO: Other, please specify	196 (98.5%)	112 (97.4%)
Responses to the tasks family caregivers perform		
	196 (98.5%)	112 (97.4%)
Commissions diverses	1 (0.5%)	1 (0.9%)
Épicerie	0 (0%)	0 (0%)
Mémoire	1 (0.5%)	1 (0.9%)
Moi vas son médecin avec elle et si besoin de quoi se soie moi téléphone pour elle	0 (0%)	0 (0%)
ramasser de la merde et laver mettre des couches	0 (0%)	0 (0%)
Répit	1 (0.5%)	1 (0.9%)
surveillance immédiate maison intergénérationelle	0 (0%)	0 (0%)
Family caregivers past AI experience		
Yes	16 (8.0%)	14 (12.2%)
No	183 (92.0%)	101 (87.8%)
AI technology family caregivers have used before - AI-based wearable devices		
AI-based wearable devices	11 (5.5%)	10 (8.7%)
NO TO: AI-based wearable devices	5 (2.5%)	4 (3.5%)
Missing	183 (92.0%)	101 (87.8%)
AI technology family caregivers have used before - AI-based assistive technology		
AI-based assistive technology	4 (2.0%)	4 (3.5%)
NO TO: AI-based assistive technology	12 (6.0%)	10 (8.7%)
Missing	183 (92.0%)	101 (87.8%)
AI technology family caregivers have used before - AI-based chatbots/virtual assistants		
AI-based chatbots/virtual assistants	2 (1.0%)	1 (0.9%)
NO TO: AI-based chatbots/virtual assistants	14 (7.0%)	13 (11.3%)
Missing	183 (92.0%)	101 (87.8%)
AI technology family caregivers have used before - Other		
Other, please specify	0 (0%)	0 (0%)
NO TO: Other, please specify	16 (8.0%)	14 (12.2%)
Missing	183 (92.0%)	101 (87.8%)
Responses to AI technology family caregivers have used before		
	199 (100%)	115 (100%)
Ca	0 (0%)	0 (0%)

	All (N=199)	No missing data (N=115)
Dexcom suivi diabète	0 (0%)	0 (0%)
Family caregivers' knowledge about AI		
Not knowledgeable	109 (54.8%)	59 (51.3%)
Somewhat knowledgeable	46 (23.1%)	29 (25.2%)
Moderately knowledgeable	37 (18.6%)	22 (19.1%)
Extremely knowledgeable	6 (3.0%)	5 (4.3%)
Missing	1 (0.5%)	0 (0%)
PEr1		
Strongly Disagree	5 (2.5%)	4 (3.5%)
Disagree	21 (10.6%)	13 (11.3%)
Agree	91 (45.7%)	68 (59.1%)
Strongly Agree	43 (21.6%)	24 (20.9%)
I don't know	39 (19.6%)	6 (5.2%)
PEr2		
Strongly Disagree	5 (2.5%)	5 (4.3%)
Disagree	25 (12.6%)	16 (13.9%)
Agree	88 (44.2%)	57 (49.6%)
Strongly Agree	43 (21.6%)	29 (25.2%)
I don't know	37 (18.6%)	8 (7.0%)
Missing	1 (0.5%)	0 (0%)
PEr3		
Strongly Disagree	8 (4.0%)	7 (6.1%)
Disagree	19 (9.5%)	13 (11.3%)
Agree	87 (43.7%)	55 (47.8%)
Strongly Agree	49 (24.6%)	36 (31.3%)
I don't know	35 (17.6%)	4 (3.5%)
Missing	1 (0.5%)	0 (0%)
PEr4		
Strongly Disagree	5 (2.5%)	5 (4.3%)
Disagree	23 (11.6%)	21 (18.3%)
Agree	82 (41.2%)	51 (44.3%)
Strongly Agree	44 (22.1%)	30 (26.1%)
I don't know	44 (22.1%)	8 (7.0%)
Missing	1 (0.5%)	0 (0%)
PEr5		
Strongly Disagree	6 (3.0%)	6 (5.2%)
Disagree	16 (8.0%)	13 (11.3%)
Agree	84 (42.2%)	50 (43.5%)
Strongly Agree	56 (28.1%)	39 (33.9%)
I don't know	35 (17.6%)	6 (5.2%)
Missing	2 (1.0%)	1 (0.9%)
PEr6		
Strongly Disagree	5 (2.5%)	5 (4.3%)
Disagree	12 (6.0%)	10 (8.7%)
Agree	85 (42.7%)	52 (45.2%)
Strongly Agree	68 (34.2%)	45 (39.1%)
I don't know	29 (14.6%)	3 (2.6%)
EEr1		
Strongly Disagree	17 (8.5%)	10 (8.7%)
Disagree	50 (25.1%)	34 (29.6%)
Agree	65 (32.7%)	49 (42.6%)
Strongly Agree	14 (7.0%)	12 (10.4%)
I don't know	53 (26.6%)	10 (8.7%)
EEr2		
Strongly Disagree	3 (1.5%)	3 (2.6%)
Disagree	22 (11.1%)	17 (14.8%)
Agree	99 (49.7%)	69 (60.0%)
Strongly Agree	27 (13.6%)	20 (17.4%)
I don't know	47 (23.6%)	6 (5.2%)
Missing	1 (0.5%)	0 (0%)

	All (N=199)	No missing data (N=115)
EEr3		
Strongly Disagree	3 (1.5%)	3 (2.6%)
Disagree	19 (9.5%)	12 (10.4%)
Agree	96 (48.2%)	66 (57.4%)
Strongly Agree	40 (20.1%)	30 (26.1%)
I don't know	40 (20.1%)	3 (2.6%)
Missing	1 (0.5%)	1 (0.9%)
EEr4		
Strongly Disagree	12 (6.0%)	8 (7.0%)
Disagree	37 (18.6%)	25 (21.7%)
Agree	57 (28.6%)	45 (39.1%)
Strongly Agree	27 (13.6%)	22 (19.1%)
I don't know	65 (32.7%)	15 (13.0%)
Missing	1 (0.5%)	0 (0%)
EEr5		
Strongly Disagree	7 (3.5%)	4 (3.5%)
Disagree	18 (9.0%)	11 (9.6%)
Agree	94 (47.2%)	70 (60.9%)
Strongly Agree	35 (17.6%)	24 (20.9%)
I don't know	44 (22.1%)	6 (5.2%)
Missing	1 (0.5%)	0 (0%)
SIr1		
Strongly Disagree	11 (5.5%)	7 (6.1%)
Disagree	37 (18.6%)	25 (21.7%)
Agree	82 (41.2%)	61 (53.0%)
Strongly Agree	23 (11.6%)	15 (13.0%)
I don't know	46 (23.1%)	7 (6.1%)
SIr2		
Strongly Disagree	16 (8.0%)	10 (8.7%)
Disagree	40 (20.1%)	30 (26.1%)
Agree	74 (37.2%)	49 (42.6%)
Strongly Agree	33 (16.6%)	24 (20.9%)
I don't know	36 (18.1%)	2 (1.7%)
SIr3		
Strongly Disagree	4 (2.0%)	3 (2.6%)
Disagree	18 (9.0%)	12 (10.4%)
Agree	90 (45.2%)	63 (54.8%)
Strongly Agree	40 (20.1%)	29 (25.2%)
I don't know	46 (23.1%)	8 (7.0%)
Missing	1 (0.5%)	0 (0%)
FCr1		
Strongly Disagree	4 (2.0%)	3 (2.6%)
Disagree	11 (5.5%)	9 (7.8%)
Agree	102 (51.3%)	71 (61.7%)
Strongly Agree	40 (20.1%)	30 (26.1%)
I don't know	42 (21.1%)	2 (1.7%)
FCr2		
Strongly Disagree	4 (2.0%)	4 (3.5%)
Disagree	25 (12.6%)	23 (20.0%)
Agree	83 (41.7%)	60 (52.2%)
Strongly Agree	28 (14.1%)	19 (16.5%)
I don't know	58 (29.1%)	9 (7.8%)
Missing	1 (0.5%)	0 (0%)
TAr1		
Strongly Disagree	12 (6.0%)	4 (3.5%)
Disagree	43 (21.6%)	27 (23.5%)
Agree	78 (39.2%)	54 (47.0%)
Strongly Agree	27 (13.6%)	20 (17.4%)
I don't know	39 (19.6%)	10 (8.7%)
TAr2		

	All (N=199)	No missing data (N=115)
Strongly Disagree	21 (10.6%)	14 (12.2%)
Disagree	74 (37.2%)	48 (41.7%)
Agree	55 (27.6%)	37 (32.2%)
Strongly Agree	20 (10.1%)	12 (10.4%)
I don't know	28 (14.1%)	3 (2.6%)
Missing	1 (0.5%)	1 (0.9%)
TAr3		
Strongly Disagree	10 (5.0%)	6 (5.2%)
Disagree	19 (9.5%)	10 (8.7%)
Agree	97 (48.7%)	65 (56.5%)
Strongly Agree	48 (24.1%)	33 (28.7%)
I don't know	23 (11.6%)	0 (0%)
Missing	2 (1.0%)	1 (0.9%)
TAr4		
Strongly Disagree	22 (11.1%)	16 (13.9%)
Disagree	73 (36.7%)	51 (44.3%)
Agree	57 (28.6%)	36 (31.3%)
Strongly Agree	20 (10.1%)	9 (7.8%)
I don't know	27 (13.6%)	3 (2.6%)
PTr1		
Strongly Disagree	17 (8.5%)	10 (8.7%)
Disagree	61 (30.7%)	47 (40.9%)
Agree	57 (28.6%)	33 (28.7%)
Strongly Agree	30 (15.1%)	20 (17.4%)
I don't know	34 (17.1%)	5 (4.3%)
PTr2		
Strongly Disagree	7 (3.5%)	7 (6.1%)
Disagree	21 (10.6%)	16 (13.9%)
Agree	87 (43.7%)	66 (57.4%)
Strongly Agree	27 (13.6%)	18 (15.7%)
I don't know	57 (28.6%)	8 (7.0%)
PTr3		
Strongly Disagree	14 (7.0%)	8 (7.0%)
Disagree	49 (24.6%)	38 (33.0%)
Agree	67 (33.7%)	41 (35.7%)
Strongly Agree	33 (16.6%)	21 (18.3%)
I don't know	36 (18.1%)	7 (6.1%)
PCr1		
Strongly Disagree	3 (1.5%)	2 (1.7%)
Disagree	32 (16.1%)	29 (25.2%)
Agree	54 (27.1%)	44 (38.3%)
Strongly Agree	32 (16.1%)	21 (18.3%)
I don't know	78 (39.2%)	19 (16.5%)
PCr2		
Strongly Disagree	10 (5.0%)	7 (6.1%)
Disagree	37 (18.6%)	31 (27.0%)
Agree	64 (32.2%)	51 (44.3%)
Strongly Agree	35 (17.6%)	23 (20.0%)
I don't know	53 (26.6%)	3 (2.6%)
EAr1		
Strongly Disagree	4 (2.0%)	2 (1.7%)
Disagree	23 (11.6%)	20 (17.4%)
Agree	81 (40.7%)	53 (46.1%)
Strongly Agree	55 (27.6%)	32 (27.8%)
I don't know	35 (17.6%)	7 (6.1%)
Missing	1 (0.5%)	1 (0.9%)
EAr2		
Strongly Disagree	2 (1.0%)	1 (0.9%)
Disagree	22 (11.1%)	20 (17.4%)
Agree	84 (42.2%)	53 (46.1%)

	All (N=199)	No missing data (N=115)
Strongly Agree	53 (26.6%)	32 (27.8%)
I don't know	38 (19.1%)	9 (7.8%)
EAr3		
Strongly Disagree	4 (2.0%)	3 (2.6%)
Disagree	14 (7.0%)	10 (8.7%)
Agree	100 (50.3%)	72 (62.6%)
Strongly Agree	50 (25.1%)	30 (26.1%)
I don't know	30 (15.1%)	0 (0%)
Missing	1 (0.5%)	0 (0%)
EAr4		
Strongly Disagree	4 (2.0%)	3 (2.6%)
Disagree	22 (11.1%)	21 (18.3%)
Agree	82 (41.2%)	52 (45.2%)
Strongly Agree	44 (22.1%)	26 (22.6%)
I don't know	45 (22.6%)	11 (9.6%)
Missing	2 (1.0%)	2 (1.7%)
BIr1		
Strongly Disagree	12 (6.0%)	7 (6.1%)
Disagree	33 (16.6%)	23 (20.0%)
Agree	55 (27.6%)	49 (42.6%)
Strongly Agree	9 (4.5%)	7 (6.1%)
I don't know	89 (44.7%)	29 (25.2%)
Missing	1 (0.5%)	0 (0%)
BIr2		
Strongly Disagree	8 (4.0%)	5 (4.3%)
Disagree	21 (10.6%)	12 (10.4%)
Agree	91 (45.7%)	72 (62.6%)
Strongly Agree	33 (16.6%)	24 (20.9%)
I don't know	46 (23.1%)	2 (1.7%)
BIr3		
Strongly Disagree	23 (11.6%)	11 (9.6%)
Disagree	54 (27.1%)	40 (34.8%)
Agree	40 (20.1%)	35 (30.4%)
Strongly Agree	8 (4.0%)	5 (4.3%)
I don't know	73 (36.7%)	23 (20.0%)
Missing	1 (0.5%)	1 (0.9%)

#Random Forest Analysis

```
library(party)
```

```
## Loading required package: mvtnorm
```

```
## Loading required package: modeltools
```

```
## Loading required package: stats4
```

```
## Loading required package: strucchange
```

```
## Loading required package: sandwich
```

```
##
## Attaching package: 'strucchange'
```

```
## The following object is masked from 'package:stringr':
##
##     boundary
```

##Creating the dataframe for the RF (by combining both the demographic data frame and construct mean score data frame) and renaming some variables so it's easier to manage

```
Combine.ELIG2Con <-cbind(ELIG.variRNC2, Constructs.num)

Combine.ELIG2Con.RN<-rename(Combine.ELIG2Con,
                        "Lang"= "Survey's Language",
                        "LivedCAN"= "Years Lived in Canada",
                        "Rela.child"= "Relationship to care recipient - child",
                        "Rela.grandchild" = "Relationship to care recipient - grandchild",
                        "Rela.spouse"= "Relationship to care recipient - spouse",
                        "Rela.sib" = "Relationship to care recipient - sibiling",
                        "Rela.fri"= "Relationship to care recipient - friend",
                        "Rela.neig" = "Relationship to care recipient - Neighbour",
                        "LiveFG" = "Living arrangement - living with the family caregiver",
                        "LiveHome" = "Living arrangement - living independently in one's own home",
                        "LiveLTC" = "Living arrangement - living in long-term care/nursing home/residential home",
                        "LiveRPA" = "Living arrangement - RPA or equivalent",
                        "No.OA" = "Number of older adults the family caregiver is caring for",
                        "NoYear.FG" = "Number of years the family caregiver has been a caregiver",
                        "No.Hour" = "Estimated number of hours of care per week provided by the family caregiver",
                        "Tasks.med" = "Tasks family caregivers perform - Medical/nursing care",
                        "Tasks.careco" = "Tasks family caregivers perform - Care coordinator",
                        "Tasks.psyco" = "Tasks family caregivers perform - Psychosocial care",
                        "Tasks.DLA" = "Tasks family caregivers perform - Daily living activities",
                        "Tasks.House" = "Tasks family caregivers perform - Household tasks",
                        "Tasks.Trans" = "Tasks family caregivers perform - Transportation",
                        "Tasks.SD" = "Tasks family caregivers perform - Substitute decision-maker",
                        "PastAI" = "Family caregivers past AI experience",
                        "PastAI.wear" = "AI technology family caregivers have used before - AI-based wearable devices",
                        "PastAI.AT" = "AI technology family caregivers have used before - AI-based assistive technology",
                        "PastAI.chatbot" = "AI technology family caregivers have used before - AI-based chatbots/virtual ass
istants",
                        "AIKnow" = "Family caregivers' knowledge about AI")
```

#Creating the RF and checking if the error rate converges based on the number of trees, and the results below shows that its does after 200 trees, so we continue to use ntree = 1000.

```
library(randomForest)
```

```
## Warning: package 'randomForest' was built under R version 4.2.3
```

```
## randomForest 4.7-1.1
```

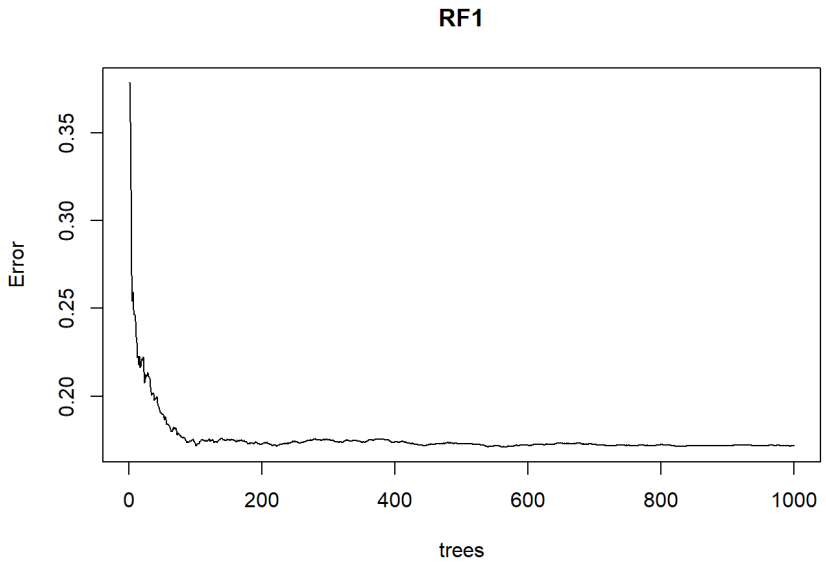
```
## Type rfNews() to see new features/changes/bug fixes.
```

```
##
## Attaching package: 'randomForest'
```

```
## The following object is masked from 'package:ggplot2':
##
##     margin
```

```
## The following object is masked from 'package:dplyr':
##
##     combine
```

```
set.seed(1234)
RF1 <- randomForest(BIr.score ~ PEr.score+EEr.score+SIr.score+FCr.score+TAr.score+
                    PTr.score+PCr.score+EAr.score+EA2r.score, data = Combine.ELIG2Con.RN,ntree=1000, na.action="na.omit")
plot(RF1)
```



##RF to explore the whole model with the constructs and demographic variables

###Based on this RF , the six demographic variables IncMSE was less than 5%, which is low when compared to majority of the construct scores' %IncMSE. As such, the demographics were not included in the final/further RF.

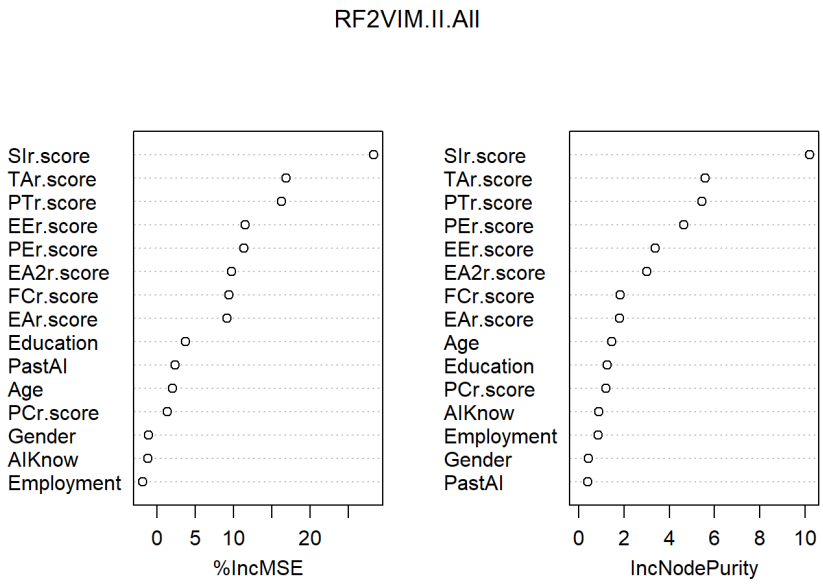
```
set.seed(1234)

RF2VIM.II.All<-randomForest(BIr.score ~ PEr.score+EEr.score+SIr.score+FCr.score+TAr.score+
                              PTr.score+PCr.score+EAr.score+EA2r.score +
                              `Age`+ `Gender`+`Education`+ `Employment`+
                              `PastAI` + `AIKnow`, data = Combine.ELIG2Con.RN, na.action="na.omit",
                            ntree=1000, importance=T)

RF2VIM.II.All
```

```
##
## Call:
##  randomForest(formula = BIr.score ~ PEr.score + EEr.score + SIr.score +      FCr.score + TAr.score + PTr.score + PCr.scor
e + EAr.score +      EA2r.score + Age + Gender + Education + Employment + PastAI +      AIKnow, data = Combine.ELIG2Con.RN,
ntree = 1000, importance = T,      na.action = "na.omit")
##               Type of random forest: regression
##                     Number of trees: 1000
## No. of variables tried at each split: 5
##
##           Mean of squared residuals: 0.1759848
##                     % Var explained: 54.94
```

```
print (varImpPlot(RF2VIM.II.All))
```

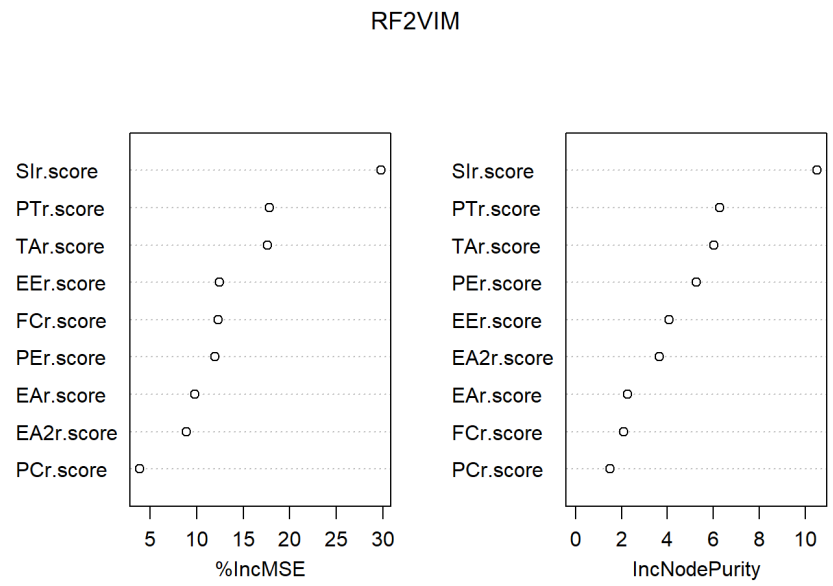


```
##              %IncMSE IncNodePurity
## PEr.score  11.319830     4.6258387
## EEr.score  11.515916     3.3768821
## SIr.score  28.333889    10.1956467
## FCr.score   9.413272     1.8330070
## TAr.score  16.874511     5.5885605
## PTr.score  16.248519     5.4328759
## PCr.score   1.303866     1.2101657
## EAr.score   9.128614     1.8123232
## EA2r.score  9.738280     3.0170450
## Age         2.018493     1.4549261
## Gender     -1.145729     0.4184413
## Education   3.728733     1.2643981
## Employment -1.881215     0.8655316
## PastAI      2.345513     0.3849159
## AIKnow     -1.244949     0.8789809
```

##RF to find the variable of importance (VIM) for only the constructs

```
set.seed(1234)
RF2VIM<-randomForest(BIr.score ~ PEr.score+EEr.score+SIr.score+FCr.score+TAr.score+
                       PTr.score+PCr.score+EAr.score+EA2r.score, data = Combine.ELIG2Con.RN, na.action="na.omit", ntree = 10
00,
                     importance=T)

varImpPlot(RF2VIM)
```




```
RF2VIM
```

```
##
## Call:
##  randomForest(formula = BIr.score ~ PEr.score + EEr.score + SIr.score +      FCr.score + TAr.score + PTr.score + PCr.scor
e + EAr.score +      EA2r.score, data = Combine.ELIG2Con.RN, ntree = 1000, importance = T,      na.action = "na.omit")
##               Type of random forest: regression
##                     Number of trees: 1000
## No. of variables tried at each split: 3
##
##           Mean of squared residuals: 0.1700097
##                     % Var explained: 56.47
```

```
RF2VIM$importance/RF2VIM$importanceSD
```

```
##              %IncMSE IncNodePurity
## PEr.score  11.935261      2099.289
## EEr.score  12.473121      2021.980
## SIr.score  29.831016      2435.178
## FCr.score  12.333396      1394.617
## TAr.score  17.639563      2352.148
## PTr.score  17.791910      2768.642
## PCr.score   3.860256      1192.652
## EAr.score   9.796856      1551.591
## EA2r.score  8.889226      1822.154
```

##Generated a bagged estimate using 1000 RF so a 95% CI for the VIM of the constructs can be derived

```
bootstrap.results<-matrix(NA,9,1000)
set.seed(1234)
for (i in 1:1000)
{
 bootstrap.data<-Combine.ELIG2Con.RN[sample(1:nrow(Combine.ELIG2Con.RN),nrow(Combine.ELIG2Con.RN),T),]
 bootstrap.rf<-randomForest(BIr.score ~ PEr.score+EEr.score+SIr.score+FCr.score+TAr.score+
                PTr.score+PCr.score+EAr.score+EA2r.score, data =bootstrap.data, na.action="na.omit",
               ntree=1000, importance=T)

 bootstrap.results[,i]<-bootstrap.rf$importance[,1]/bootstrap.rf$importanceSD
 print(i)
}
```

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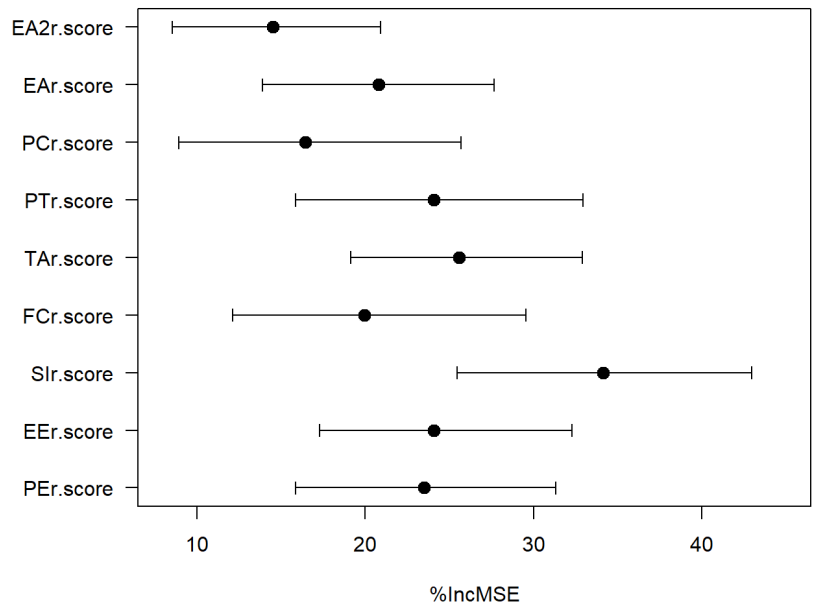
```

##Generate a plot to visualize the mean 'bagged' VIM and the 95% CI

```
par(mar=c(4,7,1,1))
plot(apply(bootstrap.results,1,mean),1:9,pch=20,cex=2,yaxt="n",xlim=c(8,45),
     ylab="",xlab="%IncMSE",ylim=c(1,9))
arrows(apply(bootstrap.results,1,quantile,c(0.025)),1:9,
       apply(bootstrap.results,1,quantile,c(0.975)),1:9,angle = 90,code=3,length=0.05)
axis(2,at=1:9,labels=row.names(bootstrap.rf$importance),las=1)
abline(v=seq(0.05,0.3,by=0.05),col="gray",lty=2)
```



#Examine the direction of the relationship between the outcome (predicted BI) and all nine constructs by generating scatter plots

```
library(DescTools)
```

```
##
## Attaching package: 'DescTools'
```

```
## The following object is masked from 'package:modeltools':
##
##     ParseFormula
```

```
library(splines)

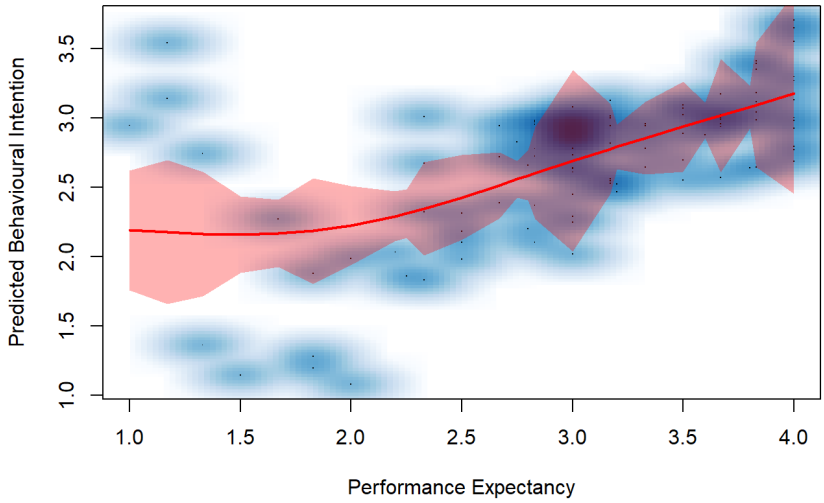
pred.BIr.RF3<-predict(RF2VIM,newdata = Combine.ELIG2Con.RN)
```

##Combine all the scatter plots into one image

```
par(mfrow=c(3,3))
```

##PE CONSTRUCT

```
smoothScatter(Combine.ELIG2Con.RN$PEr.score,pred.BIr.RF3, xlab = "Performance Expectancy", ylab = "Predicted Behavioural Int
ention")
scat.PE<-cbind(Combine.ELIG2Con.RN$PEr.score,pred.BIr.RF3)
scat.PE.line<-na.omit(scat.PE)
lines(smooth.spline(scat.PE.line[,1],scat.PE.line[,2],df=3),col="red")
```



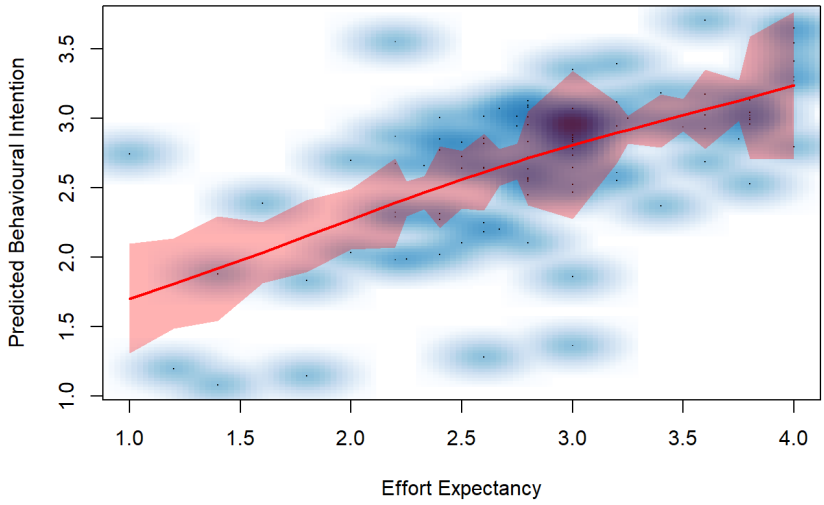
###PE Slope

```
(3.10-2.25)/(4-2)
```

```
## [1] 0.425
```

##EE CONSTRUCT

```
smoothScatter(Combine.ELIG2Con.RN$EEr.score,pred.BIr.RF3, xlab = "Effort Expectancy", ylab = "Predicted Behavioural Intentio
n")
scat.EE<-cbind(Combine.ELIG2Con.RN$EEr.score,pred.BIr.RF3)
scat.EE.line<-na.omit(scat.EE)
lines(smooth.spline(scat.EE.line[,1],scat.EE.line[,2],df=3),col="red")
```



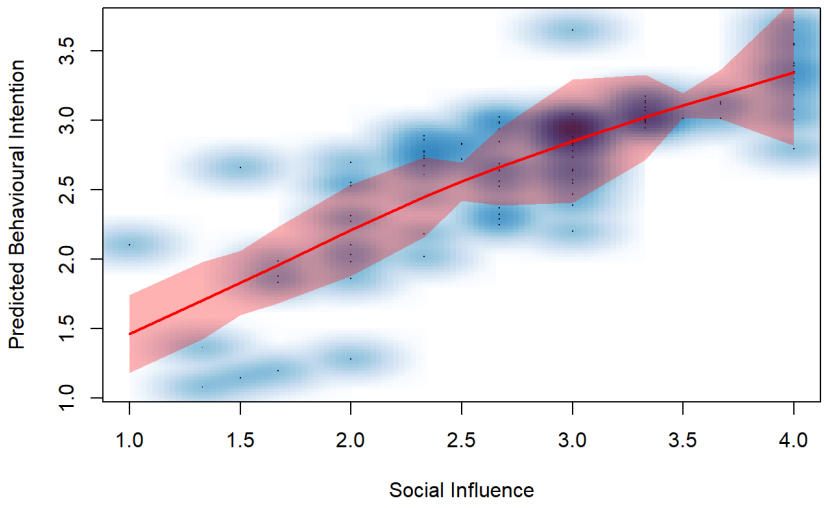
###EE Slope

```
(3.10-1.60)/(4-1)
```

```
## [1] 0.5
```

##SI CONSTRUCT

```
smoothScatter(Combine.ELIG2Con.RN$SIr.score,pred.BIr.RF3, xlab="Social Influence", ylab = "Predicted Behavioural Intention")
scat.SI<-cbind(Combine.ELIG2Con.RN$SIr.score,pred.BIr.RF3)
scat.SI.line<-na.omit(scat.SI)
lines(smooth.spline(scat.SI.line[,1],scat.SI.line[,2],df=3),col="red")
```



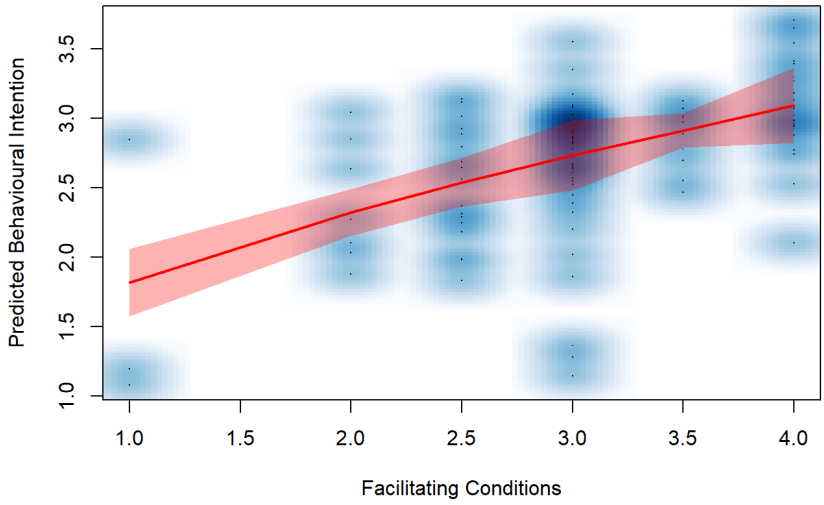
###SI Slope

```
(3.20-1.45)/(4-1)
```

```
## [1] 0.5833333
```

##FC CONSTRUCT

```
smoothScatter(Combine.ELIG2Con.RN$FCr.score,pred.BIr.RF3, xlab = "Facilitating Conditions", ylab = "Predicted Behavioural In
tention")
scat.FC<-cbind(Combine.ELIG2Con.RN$FCr.score,pred.BIr.RF3)
scat.FC.line<-na.omit(scat.FC)
lines(smooth.spline(scat.FC.line[,1],scat.FC.line[,2],df=3),col="red")
```



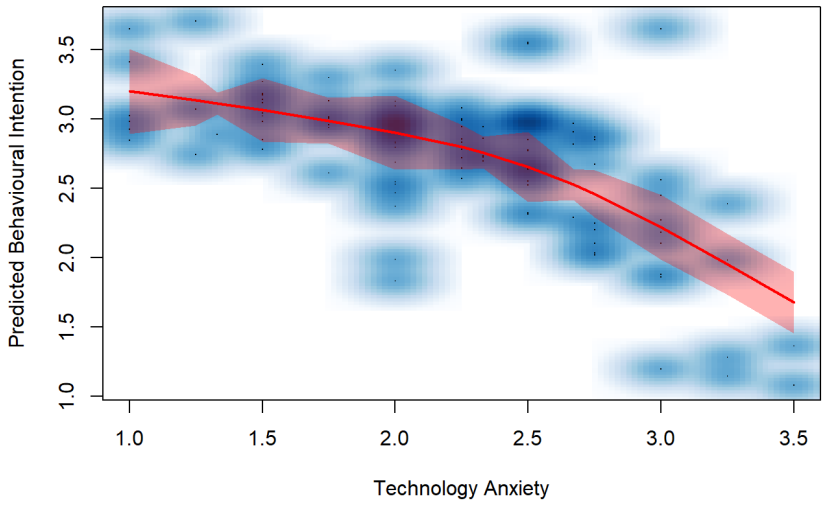
###FC Slope

```
(2.90-1.80)/(4-1)
```

```
## [1] 0.3666667
```

##TA CONSTRUCT

```
smoothScatter(Combine.ELIG2Con.RN$TAr.score,pred.BIr.RF3, xlab = "Technology Anxiety", ylab = "Predicted Behavioural Intenti
on")
scat.TA<-cbind(Combine.ELIG2Con.RN$TAr.score,pred.BIr.RF3)
scat.TA.line<-na.omit(scat.TA)
lines(smooth.spline(scat.TA.line[,1],scat.TA.line[,2],df=3),col="red")
```



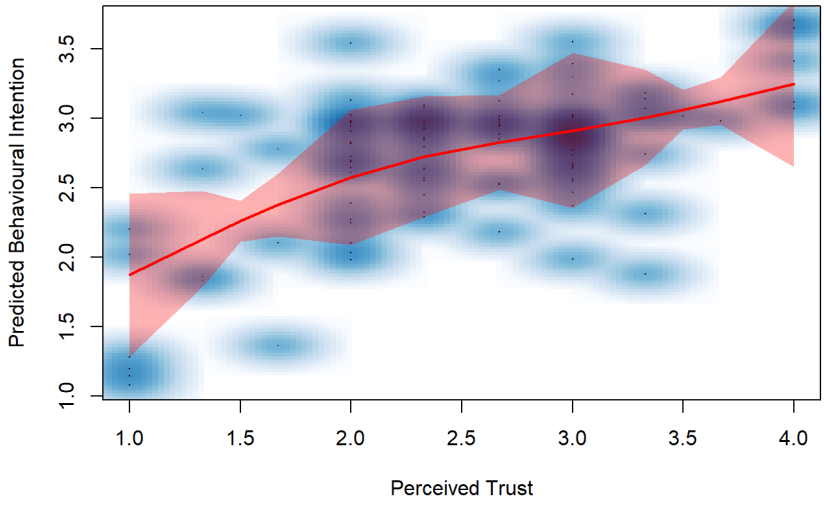
###TA Slope

```
(1.65-3.25)/(3.5-1)
```

```
## [1] -0.64
```

##PT CONSTRUCT

```
smoothScatter(Combine.ELIG2Con.RN$PTr.score,pred.BIr.RF3, xlab = "Perceived Trust", ylab = "Predicted Behavioural Intentio
n")
scat.PT<-cbind(Combine.ELIG2Con.RN$PTr.score,pred.BIr.RF3)
scat.PT.line<-na.omit(scat.PT)
lines(smooth.spline(scat.PT.line[,1],scat.PT.line[,2],df=3),col="red")
```



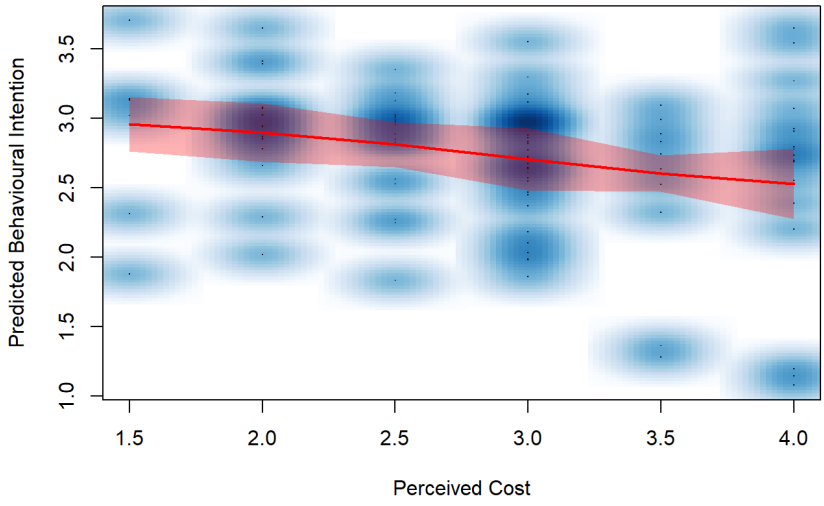
###PT Slope

```
(3.10-1.80)/(4-1)
```

```
## [1] 0.4333333
```

##PC CONSTRUCT

```
smoothScatter(Combine.ELIG2Con.RN$PCr.score,pred.BIr.RF3, xlab="Perceived Cost", ylab = "Predicted Behavioural Intention")
scat.PC<-cbind(Combine.ELIG2Con.RN$PCr.score,pred.BIr.RF3)
scat.PC.line<-na.omit(scat.PC)
lines(smooth.spline(scat.PC.line[,1],scat.PC.line[,2],df=3),col="red")
```



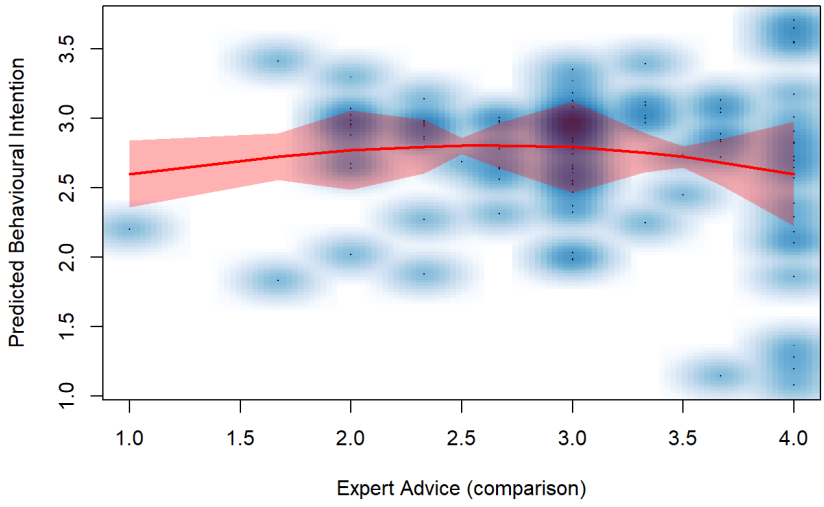
###PC Slope

```
(2.65-2.95)/(4-1.5)
```

```
## [1] -0.12
```

##EA CONSTRUCT

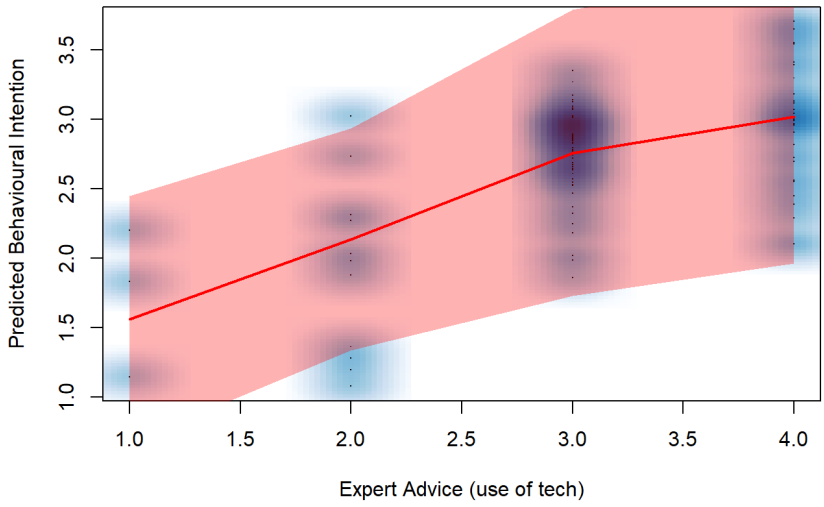
```
smoothScatter(Combine.ELIG2Con.RN$EAr.score,pred.BIr.RF3, xlab = "Expert Advice (comparison)", ylab = "Predicted Behavioural
Intention")
scat.EA<-cbind(Combine.ELIG2Con.RN$EAr.score,pred.BIr.RF3)
scat.EA.line<-na.omit(scat.EA)
lines(smooth.spline(scat.EA.line[,1],scat.EA.line[,2],df=3),col="red")
```



###EA Slope - Not calculated since its not linear but a quadratic association

##EA2 CONSTRUCT

```
smoothScatter(Combine.ELIG2Con.RN$EA2r.score,pred.BIr.RF3, xlab = "Expert Advice (use of tech)", ylab = "Predicted Behaviour
al Intention")
scat.EA2<-cbind(Combine.ELIG2Con.RN$EA2r.score,pred.BIr.RF3)
scat.EA2.line<-na.omit(scat.EA2)
lines(smooth.spline(scat.EA2.line[,1],scat.EA2.line[,2],df=3),col="red")
```



###EA2 Slope

```
(2.80-1.55)/(4-1)
```

```
## [1] 0.4166667
```

#**Further analysis**: Converted the RF VIM (Inc MSE) to the item scale (1 to 4) and compared the observed BI score vs. predicted BI score

##The predicted BI score has two models: (1) full model with all variables and (2) every reduced model had one variable that was removed at a time while the others stayed constant

##To view the difference between the full vs reduced model, we generated a histogram and the interquartile range of the difference was presented within the plots.

##Fit all nine of my plots as one figure

```
par(mfrow=c(3,3))
```

##Remove the PE score and plot

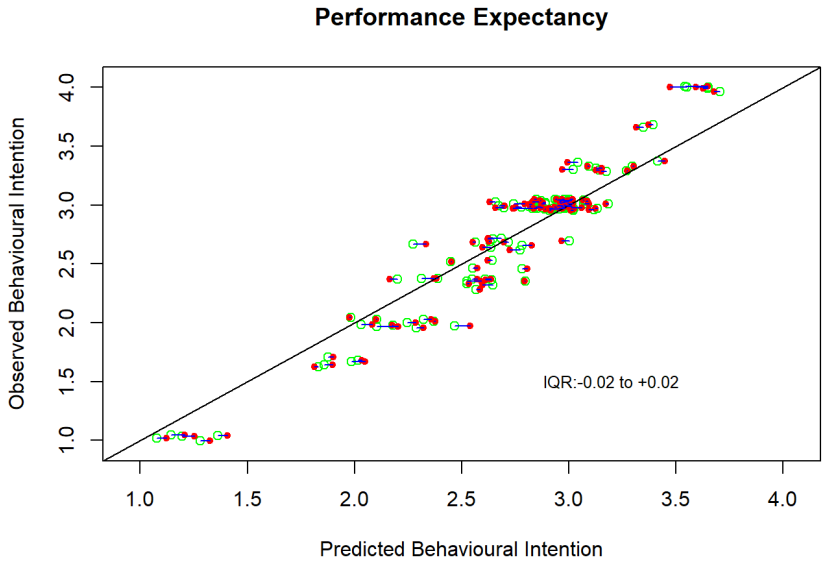
```
set.seed(123)
RF2VIM.II.PE<-randomForest(BIr.score ~ EEr.score+SIr.score+FCr.score+TAr.score+
                      PTr.score+PCr.score+EAr.score+EA2r.score, data = Combine.ELIG2Con.RN, na.action="na.omit",
                    ntree=1000, importance=T)

pred.BIr.RF3.II.PE<-predict(RF2VIM.II.PE,newdata = Combine.ELIG2Con.RN)

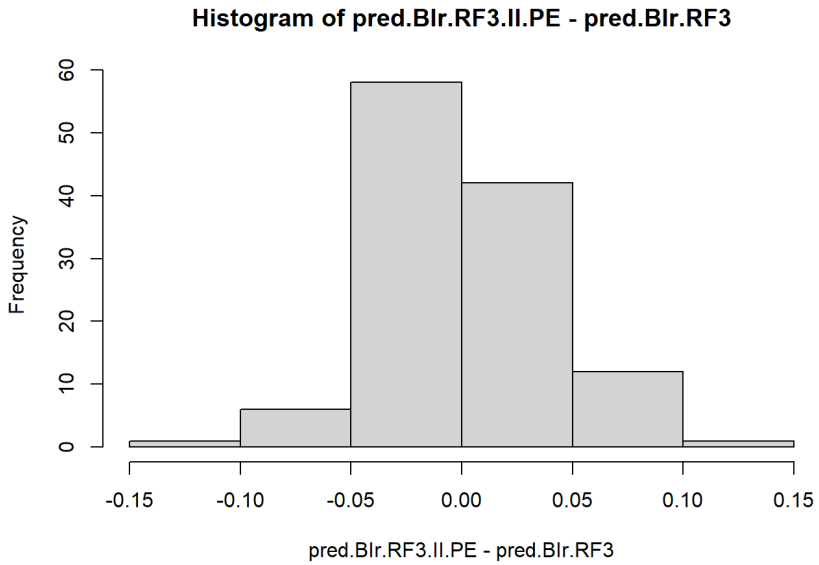

pred.BIr.RF3.II.PE[which(is.na(pred.BIr.RF3))]<-NA


jit<-runif(length(pred.BIr.RF3),-0.05,0.05)

plot(pred.BIr.RF3,BIr.score+jit,xlim=c(0.95,4.05),ylim=c(0.95,4.05), col="green",
     main = "Performance Expectancy",
     xlab = "Predicted Behavioural Intention", ylab = "Observed Behavioural Intention")
points(pred.BIr.RF3.II.PE,BIr.score+jit,pch=20,col="red")
abline(a=0,b=1)
arrows(pred.BIr.RF3,BIr.score+jit,pred.BIr.RF3.II.PE,BIr.score+jit,
       col="blue",length=0.00)
text(3.2,1.5,"IQR:-0.02 to +0.02",cex=0.8)
```




```
hist(pred.BIr.RF3.II.PE-pred.BIr.RF3)
```




```
summary(pred.BIr.RF3.II.PE-pred.BIr.RF3)
```

```
##     Min.  1st Qu.   Median     Mean  3rd Qu.     Max.     NA's
## -0.12918 -0.02092 -0.00343  0.00103  0.02467  0.10704       79
```

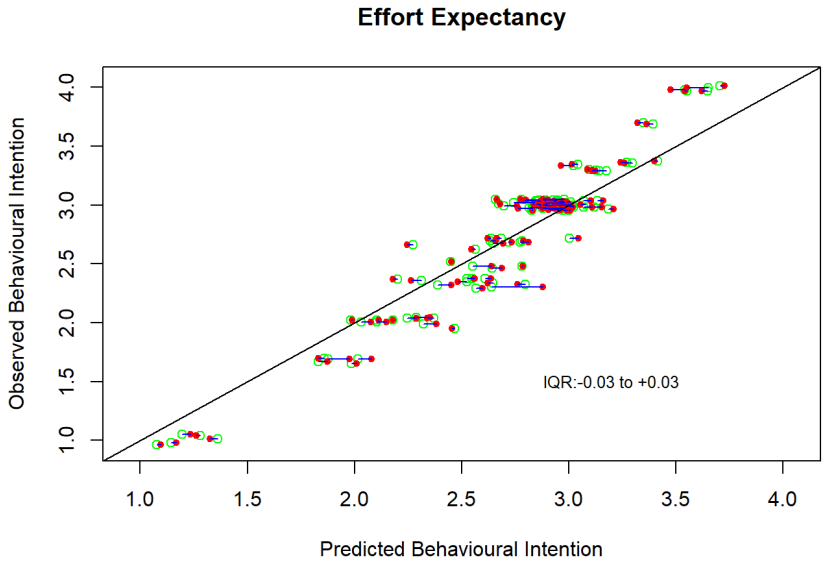
##Remove the EE score and plot

```
set.seed(123)
RF2VIM.II.EE<-randomForest(BIr.score ~ PEr.score+SIr.score+FCr.score+TAr.score+
                      PTr.score+PCr.score+EAr.score+EA2r.score, data = Combine.ELIG2Con.RN, na.action="na.omit",
                    ntree=1000, importance=T)

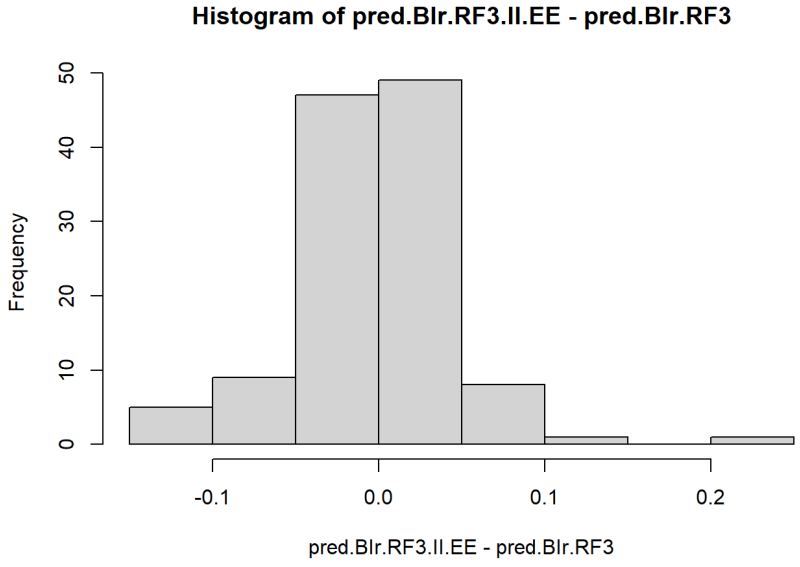
pred.BIr.RF3.II.EE<-predict(RF2VIM.II.EE,newdata = Combine.ELIG2Con.RN)


pred.BIr.RF3.II.EE[which(is.na(pred.BIr.RF3))]<-NA


jit<-runif(length(pred.BIr.RF3),-0.05,0.05)
plot(pred.BIr.RF3,BIr.score+jit,xlim=c(0.95,4.05),ylim=c(0.95,4.05), col="green",
     main = "Effort Expectancy",
     xlab = "Predicted Behavioural Intention", ylab = "Observed Behavioural Intention")
points(pred.BIr.RF3.II.EE,BIr.score+jit,pch=20,col="red")
abline(a=0,b=1)
arrows(pred.BIr.RF3,BIr.score+jit,pred.BIr.RF3.II.EE,BIr.score+jit,
       col="blue",length=0.00)
text(3.2,1.5,"IQR:-0.03 to +0.03",cex=0.8)
```




```
hist(pred.BIr.RF3.II.EE-pred.BIr.RF3)
```




```
summary(pred.BIr.RF3.II.EE-pred.BIr.RF3)
```

```
##     Min.  1st Qu.   Median     Mean  3rd Qu.     Max.     NA's
## -0.10095 -0.02556 -0.00229 -0.00037  0.02544  0.23693       79
```

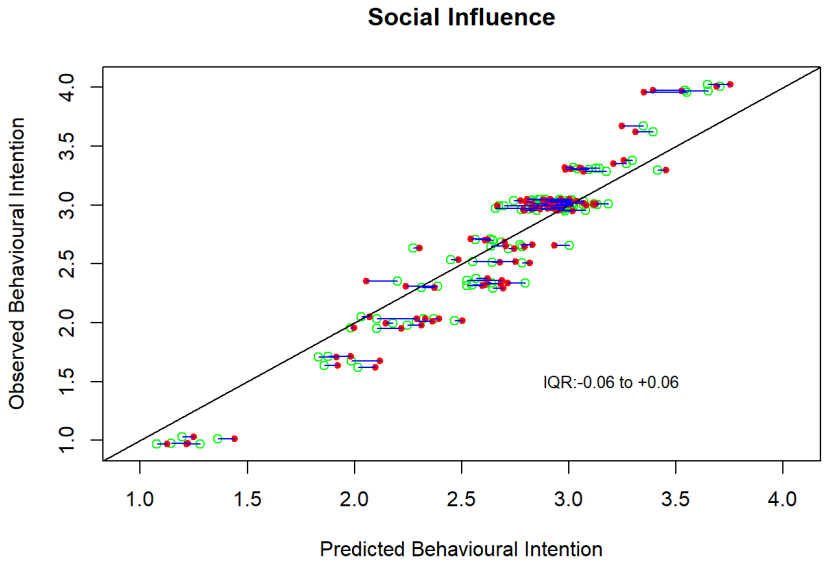
##Remove the SI score and plot

```
set.seed(123)
RF2VIM.II.SI<-randomForest(BIr.score ~ PEr.score+EEr.score+FCr.score+TAr.score+
                           PTr.score+PCr.score+EAr.score+EA2r.score, data = Combine.ELIG2Con.RN, na.action="na.omit",
                         ntree=1000, importance=T)

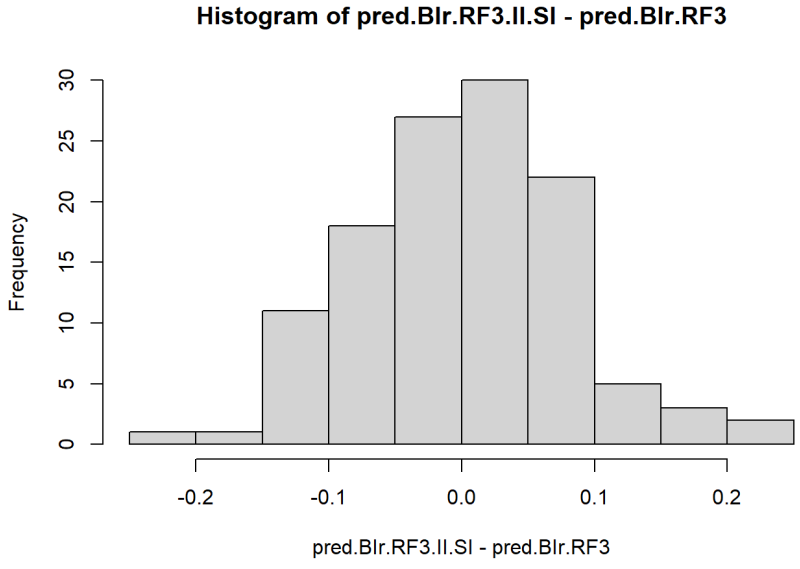
pred.BIr.RF3.II.SI<-predict(RF2VIM.II.SI,newdata = Combine.ELIG2Con.RN)


pred.BIr.RF3.II.SI[which(is.na(pred.BIr.RF3))]<-NA


jit<-runif(length(pred.BIr.RF3),-0.05,0.05)
plot(pred.BIr.RF3,BIr.score+jit,xlim=c(0.95,4.05),ylim=c(0.95,4.05), col="green",
     main = "Social Influence",
     xlab = "Predicted Behavioural Intention", ylab = "Observed Behavioural Intention")
points(pred.BIr.RF3.II.SI,BIr.score+jit,pch=20,col="red")
abline(a=0,b=1)
arrows(pred.BIr.RF3,BIr.score+jit,pred.BIr.RF3.II.SI,BIr.score+jit,
       col="blue",length=0.00)
text(3.2,1.5,"IQR:-0.06 to +0.06",cex=0.8)
```




```
hist(pred.BIr.RF3.II.SI-pred.BIr.RF3)
```




```
summary(pred.BIr.RF3.II.SI-pred.BIr.RF3)
```

```
##     Min.  1st Qu.   Median     Mean  3rd Qu.     Max.     NA's
## -0.24703 -0.05540  0.00812  0.00140  0.05666  0.24512       79
```

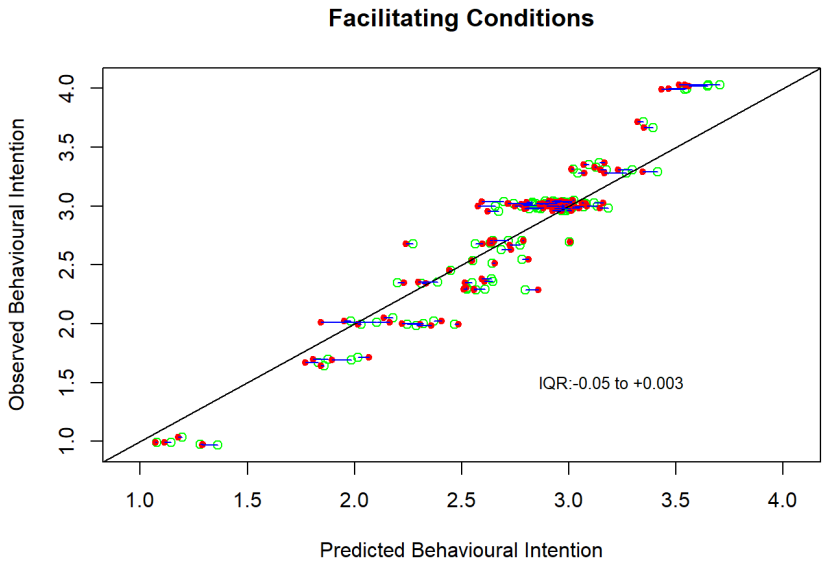
##Remove the FC score and plot

```
set.seed(123)
RF2VIM.II.FC<-randomForest(BIr.score ~ PEr.score+EEr.score+SIr.score+TAr.score+
                      PTr.score+PCr.score+EAr.score+EA2r.score, data = Combine.ELIG2Con.RN, na.action="na.omit",
                    ntree=1000, importance=T)

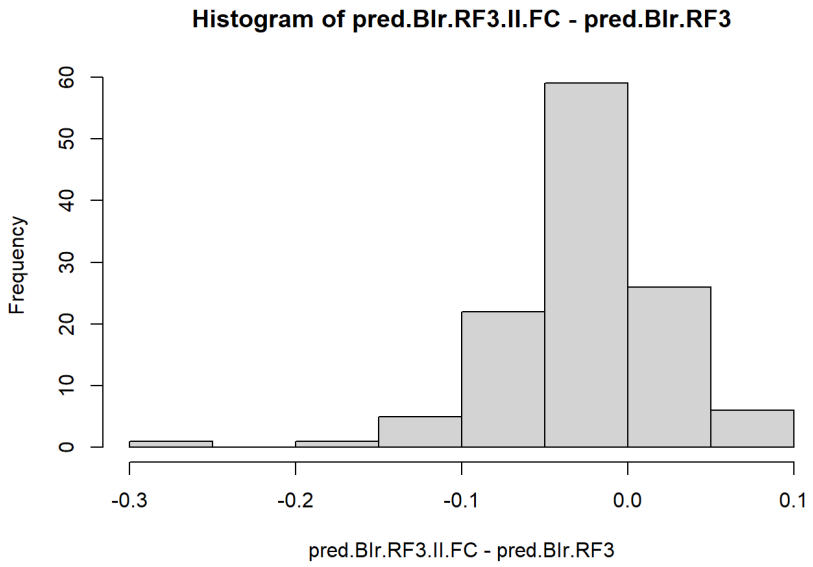
pred.BIr.RF3.II.FC<-predict(RF2VIM.II.FC,newdata = Combine.ELIG2Con.RN)

pred.BIr.RF3.II.FC[which(is.na(pred.BIr.RF3))]<-NA

jit<-runif(length(pred.BIr.RF3),-0.05,0.05)
plot(pred.BIr.RF3,BIr.score+jit,xlim=c(0.95,4.05),ylim=c(0.95,4.05), col="green",
     main = "Facilitating Conditions",
     xlab = "Predicted Behavioural Intention", ylab = "Observed Behavioural Intention")
points(pred.BIr.RF3.II.FC,BIr.score+jit,pch=20,col="red")
abline(a=0,b=1)
arrows(pred.BIr.RF3,BIr.score+jit,pred.BIr.RF3.II.FC,BIr.score+jit,
       col="blue",length=0.00)
text(3.2,1.5,"IQR:-0.05 to +0.003",cex=0.8)
```




```
hist(pred.BIr.RF3.II.FC-pred.BIr.RF3)
```




```
summary(pred.BIr.RF3.II.FC-pred.BIr.RF3)
```

```
##     Min.  1st Qu.   Median     Mean  3rd Qu.     Max.     NA's
## -0.25960 -0.04868 -0.01521 -0.02400  0.00302  0.09257       79
```

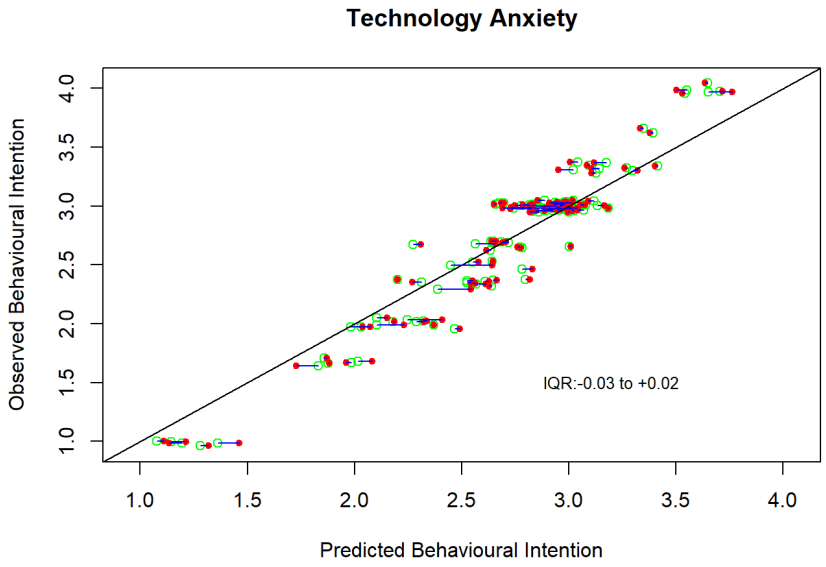
##Remove the TA score and plot

```
set.seed(123)
RF2VIM.II.TA<-randomForest(BIr.score ~ PEr.score+EEr.score+SIr.score+FCr.score+
                      PTr.score+PCr.score+EAr.score+EA2r.score, data = Combine.ELIG2Con.RN, na.action="na.omit",
                    ntree=1000, importance=T)

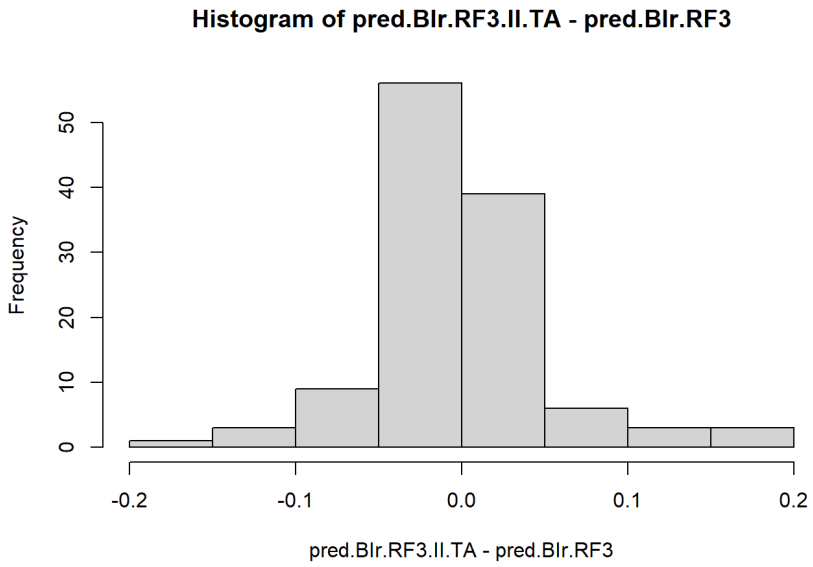
pred.BIr.RF3.II.TA<-predict(RF2VIM.II.TA,newdata = Combine.ELIG2Con.RN)

pred.BIr.RF3.II.TA[which(is.na(pred.BIr.RF3))]<-NA

jit<-runif(length(pred.BIr.RF3),-0.05,0.05)
plot(pred.BIr.RF3,BIr.score+jit,xlim=c(0.95,4.05),ylim=c(0.95,4.05), col="green",
     main = "Technology Anxiety",
     xlab = "Predicted Behavioural Intention", ylab = "Observed Behavioural Intention")
points(pred.BIr.RF3.II.TA,BIr.score+jit,pch=20,col="red")
abline(a=0,b=1)
arrows(pred.BIr.RF3,BIr.score+jit,pred.BIr.RF3.II.TA,BIr.score+jit,
       col="blue",length=0.00)
text(3.2,1.5,"IQR:-0.03 to +0.02",cex=0.8)
```




```
hist(pred.BIr.RF3.II.TA-pred.BIr.RF3)
```




```
summary(pred.BIr.RF3.II.TA-pred.BIr.RF3)
```

```
##     Min.  1st Qu.   Median     Mean  3rd Qu.     Max.     NA's
## -0.15284 -0.02601 -0.00312 -0.00009  0.01818  0.19528       79
```

##Remove the PT score and plot

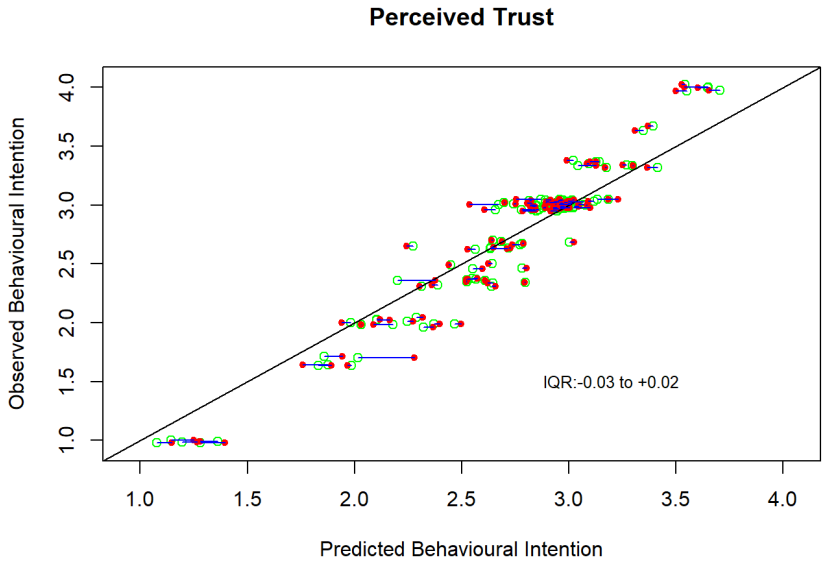
```
set.seed(123)
RF2VIM.II.PT<-randomForest(BIr.score ~ PEr.score+EEr.score+SIr.score+FCr.score+TAr.score+
                      PCr.score+EAr.score+EA2r.score, data = Combine.ELIG2Con.RN, na.action="na.omit",
                    ntree=1000, importance=T)

pred.BIr.RF3.II.PT<-predict(RF2VIM.II.PT,newdata = Combine.ELIG2Con.RN)

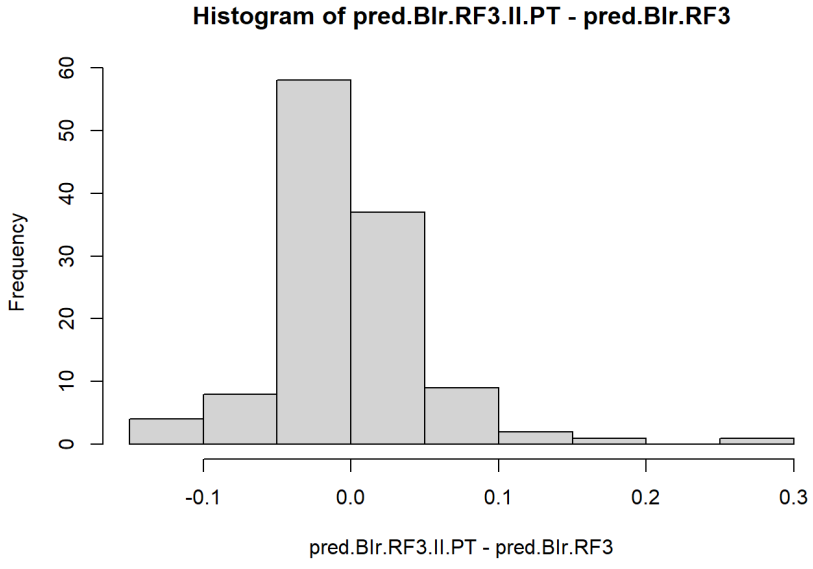
pred.BIr.RF3.II.PT[which(is.na(pred.BIr.RF3))]<-NA



jit<-runif(length(pred.BIr.RF3),-0.05,0.05)
plot(pred.BIr.RF3,BIr.score+jit,xlim=c(0.95,4.05),ylim=c(0.95,4.05), col="green",
     main = "Perceived Trust",
     xlab = "Predicted Behavioural Intention", ylab = "Observed Behavioural Intention")
points(pred.BIr.RF3.II.PT,BIr.score+jit,pch=20,col="red")
abline(a=0,b=1)
arrows(pred.BIr.RF3,BIr.score+jit,pred.BIr.RF3.II.PT,BIr.score+jit,
       col="blue",length=0.00)
text(3.2,1.5,"IQR:-0.03 to +0.02",cex=0.8)
```




```
hist(pred.BIr.RF3.II.PT-pred.BIr.RF3)
```




```
summary(pred.BIr.RF3.II.PT-pred.BIr.RF3)
```

```
##     Min.  1st Qu.   Median     Mean  3rd Qu.     Max.     NA's
## -0.13724 -0.02536 -0.00802 -0.00168  0.01819  0.26179       79
```

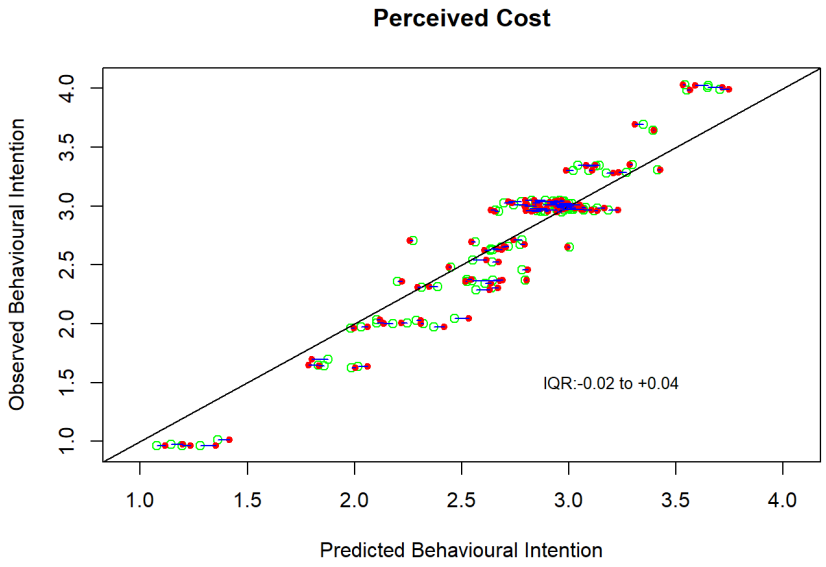
##Remove the PC score and plot

```
set.seed(123)
RF2VIM.II.PC<-randomForest(BIr.score ~ PEr.score+EEr.score+SIr.score+FCr.score+TAr.score+
                      PTr.score+EAr.score+EA2r.score, data = Combine.ELIG2Con.RN, na.action="na.omit",
                    ntree=1000, importance=T)

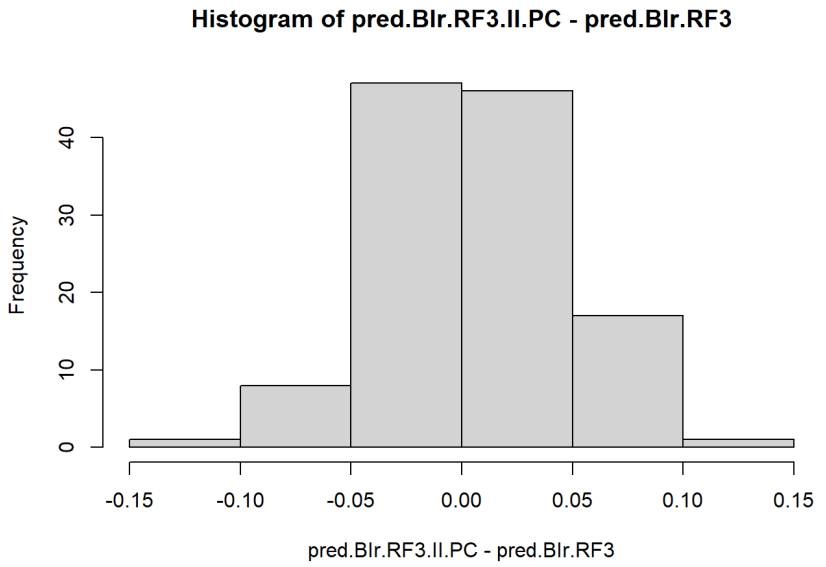
pred.BIr.RF3.II.PC<-predict(RF2VIM.II.PC,newdata = Combine.ELIG2Con.RN)

pred.BIr.RF3.II.PC[which(is.na(pred.BIr.RF3))]<-NA

jit<-runif(length(pred.BIr.RF3),-0.05,0.05)
plot(pred.BIr.RF3,BIr.score+jit,xlim=c(0.95,4.05),ylim=c(0.95,4.05), col="green",
     main = "Perceived Cost",
     xlab = "Predicted Behavioural Intention", ylab = "Observed Behavioural Intention")
points(pred.BIr.RF3.II.PC,BIr.score+jit,pch=20,col="red")
abline(a=0,b=1)
arrows(pred.BIr.RF3,BIr.score+jit,pred.BIr.RF3.II.PC,BIr.score+jit,
       col="blue",length=0.00)
text(3.2,1.5,"IQR:-0.02 to +0.04",cex=0.8)
```




```
hist(pred.BIr.RF3.II.PC-pred.BIr.RF3)
```




```
summary(pred.BIr.RF3.II.PC-pred.BIr.RF3)
```

```
##     Min.  1st Qu.   Median     Mean  3rd Qu.     Max.     NA's
## -0.10125 -0.02449  0.00891  0.00569  0.03545  0.13139       79
```

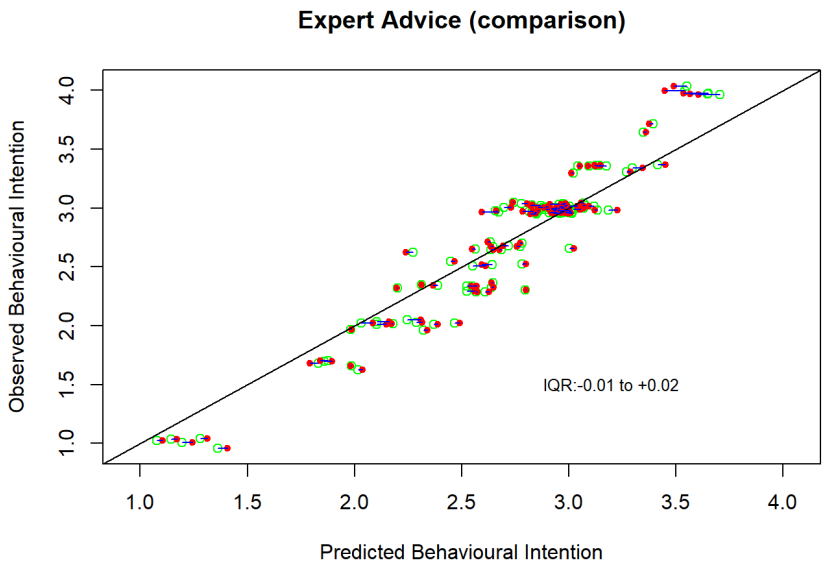
##Remove the EA score and plot

```
set.seed(123)
RF2VIM.II.EA<-randomForest(BIr.score ~ PEr.score+EEr.score+SIr.score+FCr.score+TAr.score+
                      PTr.score+PCr.score+EA2r.score, data = Combine.ELIG2Con.RN, na.action="na.omit",
                    ntree=1000, importance=T)

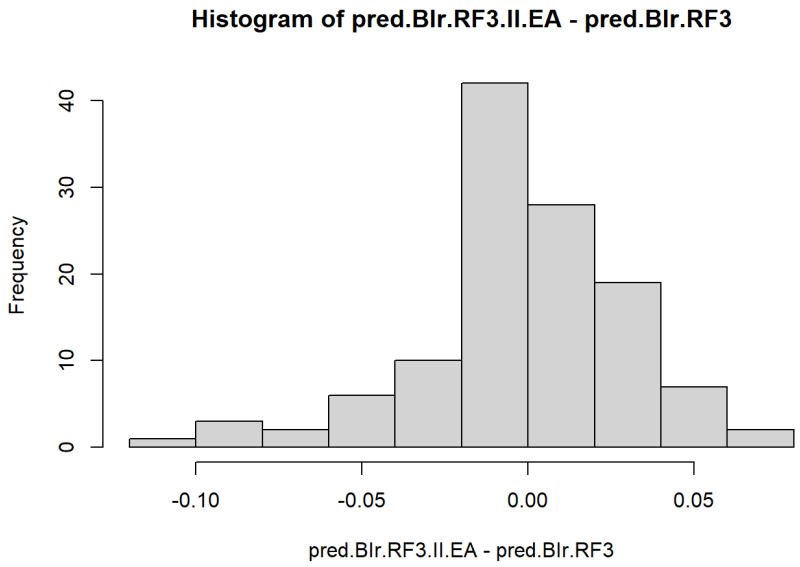
pred.BIr.RF3.II.EA<-predict(RF2VIM.II.EA,newdata = Combine.ELIG2Con.RN)

pred.BIr.RF3.II.EA[which(is.na(pred.BIr.RF3))]<-NA

jit<-runif(length(pred.BIr.RF3),-0.05,0.05)
plot(pred.BIr.RF3,BIr.score+jit,xlim=c(0.95,4.05),ylim=c(0.95,4.05), col="green",
     main = "Expert Advice (comparison)",
     xlab = "Predicted Behavioural Intention", ylab = "Observed Behavioural Intention")
points(pred.BIr.RF3.II.EA,BIr.score+jit,pch=20,col="red")
abline(a=0,b=1)
arrows(pred.BIr.RF3,BIr.score+jit,pred.BIr.RF3.II.EA,BIr.score+jit,
       col="blue",length=0.00)
text(3.2,1.5,"IQR:-0.01 to +0.02",cex=0.8)
```




```
hist(pred.BIr.RF3.II.EA-pred.BIr.RF3)
```




```
summary(pred.BIr.RF3.II.EA-pred.BIr.RF3)
```

```
##     Min.  1st Qu.   Median     Mean  3rd Qu.     Max.     NA's
## -0.11451 -0.01416 -0.00226 -0.00193  0.01877  0.06294       79
```

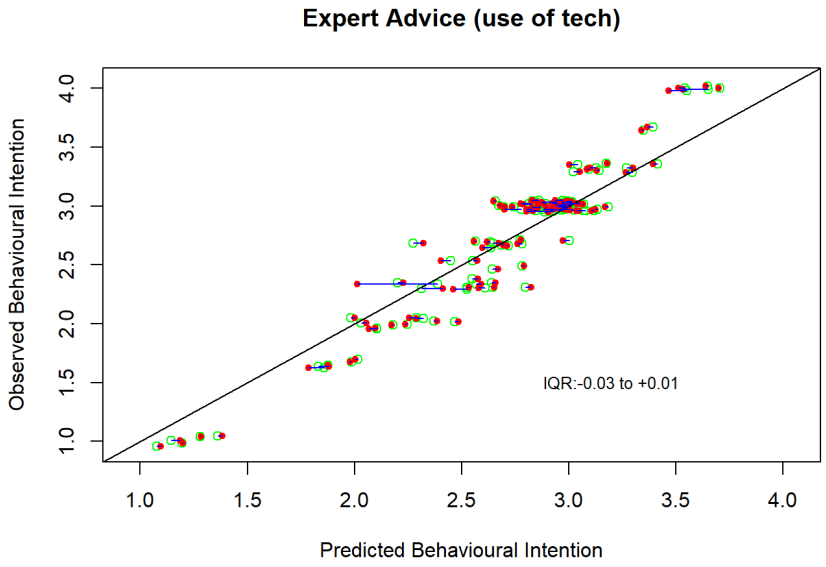
##Remove the EA2 score and plot

```
set.seed(123)
RF2VIM.II.EA2<-randomForest(BIr.score ~ PEr.score+EEr.score+SIr.score+FCr.score+TAr.score+
                      PTr.score+PCr.score+EAr.score, data = Combine.ELIG2Con.RN, na.action="na.omit",
                    ntree=1000, importance=T)

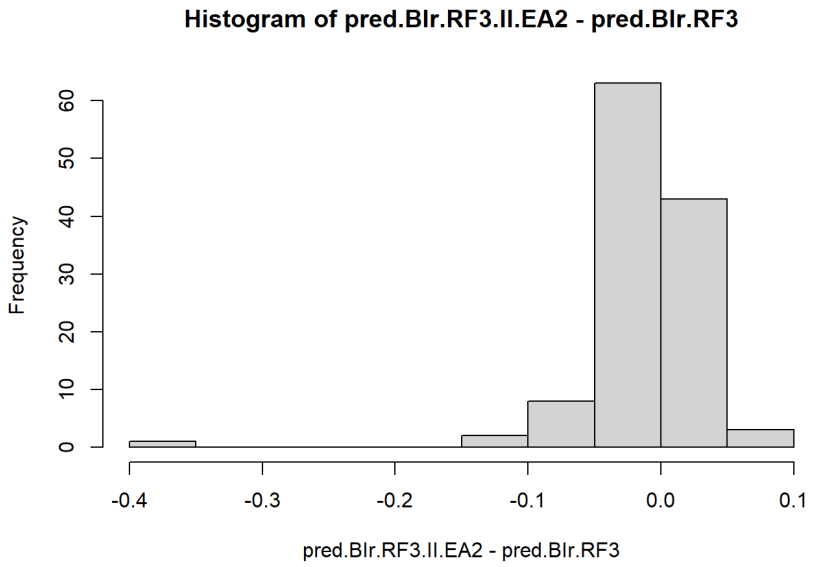
pred.BIr.RF3.II.EA2<-predict(RF2VIM.II.EA2,newdata = Combine.ELIG2Con.RN)

pred.BIr.RF3.II.EA2[which(is.na(pred.BIr.RF3))]<-NA

jit<-runif(length(pred.BIr.RF3),-0.05,0.05)
plot(pred.BIr.RF3,BIr.score+jit,xlim=c(0.95,4.05),ylim=c(0.95,4.05), col="green",
     main = "Expert Advice (use of tech)",
     xlab = "Predicted Behavioural Intention", ylab = "Observed Behavioural Intention")
points(pred.BIr.RF3.II.EA2,BIr.score+jit,pch=20,col="red")
abline(a=0,b=1)
arrows(pred.BIr.RF3,BIr.score+jit,pred.BIr.RF3.II.EA2,BIr.score+jit,
       col="blue",length=0.00)
text(3.2,1.5,"IQR:-0.03 to +0.01",cex=0.8)
```




```
hist(pred.BIr.RF3.II.EA2-pred.BIr.RF3)
```




```
summary(pred.BIr.RF3.II.EA2-pred.BIr.RF3)
```

```
##     Min.  1st Qu.   Median     Mean  3rd Qu.     Max.     NA's
## -0.37522 -0.02843 -0.00938 -0.01119  0.00915  0.09857       79
```

#Confusion matrix to help compliment the further analysis above. The findings of the matrix will be included in the figure (generated within the codes above).

##The purpose is to help the reader understand how many respondents from the full vs reduced model moved from agree to disagree (or vis versa) on their predicted behavior intention.

```
predict.all<-predict(RF2VIM)
cat.predict.all<-cut(predict.all,2.5,labels=c("disagree","agree"))
table(cat.predict.all)
```

```
## cat.predict.all
## disagree    agree
##       16       99
```

###PE Construct

```
predict.wo.PE<-predict(RF2VIM.II.PE)
cat.predict.wo.PE<-cut(predict.wo.PE,2.5,labels=c("disagree","agree"))
table(cat.predict.all,cat.predict.wo.PE)
```

```
##               cat.predict.wo.PE
## cat.predict.all disagree agree
##        disagree       14     2
##        agree           1    98
```

###EE Construct

```
predict.wo.EE<-predict(RF2VIM.II.EE)
cat.predict.wo.EE<-cut(predict.wo.EE,2.5,labels=c("disagree","agree"))
table(cat.predict.all,cat.predict.wo.EE)
```

```
##               cat.predict.wo.EE
## cat.predict.all disagree agree
##        disagree       16     0
##        agree           2    97
```

###SI Construct

```
predict.wo.SI<-predict(RF2VIM.II.SI)
cat.predict.wo.SI<-cut(predict.wo.SI,2.5,labels=c("disagree","agree"))
table(cat.predict.all,cat.predict.wo.SI)
```

```
##               cat.predict.wo.SI
## cat.predict.all disagree agree
##        disagree       12     4
##        agree           4    95
```

###FC Construct + fix the argument so they has the same length (i.e., 115)

```
predict.wo.FC<-predict(RF2VIM.II.FC)
cat.predict.wo.FC<-cut(predict.wo.FC,2.5,labels=c("disagree","agree"))

subdat.FC<-cbind(BIr.score,PEr.score, EEr.score ,SIr.score, TAr.score, PTr.score , PCr.score , EAr.score , EA2r.score)
subdat.full<-cbind(BIr.score,PEr.score, EEr.score ,SIr.score, FCr.score, TAr.score, PTr.score , PCr.score , EAr.score , EA2
r.score)
ix.FC<-rownames(na.omit(as.data.frame(subdat.FC)))
iy.FC<-rownames(na.omit(as.data.frame(subdat.full)))

table(cat.predict.all,cat.predict.wo.FC[which(ix.FC %in% iy.FC)])
```

```
##
## cat.predict.all disagree agree
##        disagree       16     0
##        agree           7    92
```

###TA Construct

```
predict.wo.TA<-predict(RF2VIM.II.TA)
cat.predict.wo.TA<-cut(predict.wo.TA,2.5,labels=c("disagree","agree"))
table(cat.predict.all,cat.predict.wo.TA)
```

```
##               cat.predict.wo.TA
## cat.predict.all disagree agree
##        disagree       15     1
##        agree           4    95
```

###PT Construct + fix the argument so they has the same length (i.e., 115)

```
predict.wo.PT<-predict(RF2VIM.II.PT)
cat.predict.wo.PT<-cut(predict.wo.PT,2.5,labels=c("disagree","agree"))

subdat.PT<-cbind(BIr.score,PEr.score, EEr.score ,SIr.score, FCr.score, TAr.score, PCr.score , EAr.score , EA2r.score)
ix.PT<-rownames(na.omit(as.data.frame(subdat.PT)))
iy.PT<-rownames(na.omit(as.data.frame(subdat.full)))

table(cat.predict.all,cat.predict.wo.PT[which(ix.PT %in% iy.PT)])
```

```
##
## cat.predict.all disagree agree
##        disagree       15     1
##        agree           3    96
```

###PC Construct + fix the argument so they has the same length (i.e., 115)

```
predict.wo.PC<-predict(RF2VIM.II.PC)
cat.predict.wo.PC<-cut(predict.wo.PC,2.5,labels=c("disagree","agree"))

subdat.PC<-cbind(BIr.score,PEr.score, EEr.score ,SIr.score, FCr.score, TAr.score, PTr.score , EAr.score , EA2r.score)
ix.PC<-rownames(na.omit(as.data.frame(subdat.PC)))
iy.PC<-rownames(na.omit(as.data.frame(subdat.full)))

table(cat.predict.all,cat.predict.wo.PC[which(ix.PC %in% iy.PC)])
```

```
##
## cat.predict.all disagree agree
##        disagree       16     0
##        agree           3    96
```

###EA Construct + fix the argument so they has the same length (i.e., 115)

```
predict.wo.EA<-predict(RF2VIM.II.EA)
cat.predict.wo.EA<-cut(predict.wo.EA,2.5,labels=c("disagree","agree"))

subdat.EA<-cbind(BIr.score,PEr.score, EEr.score ,SIr.score, FCr.score, TAr.score, PTr.score , PCr.score , EA2r.score)
ix.EA<-rownames(na.omit(as.data.frame(subdat.EA)))
iy.EA<-rownames(na.omit(as.data.frame(subdat.full)))

table(cat.predict.all,cat.predict.wo.EA[which(ix.EA %in% iy.EA)])
```

```
##
## cat.predict.all disagree agree
##        disagree       15     1
##        agree           3    96
```

###EA2 Construct + fix the argument so they has the same length (i.e., 115)

```
predict.wo.EA2<-predict(RF2VIM.II.EA2)
cat.predict.wo.EA2<-cut(predict.wo.EA2,2.5,labels=c("disagree","agree"))

subdat.EA2<-cbind(BIr.score,PEr.score, EEr.score ,SIr.score, FCr.score, TAr.score, PTr.score , PCr.score , EAr.score)
ix.EA2<-rownames(na.omit(as.data.frame(subdat.EA2)))
iy.EA2<-rownames(na.omit(as.data.frame(subdat.full)))

table(cat.predict.all,cat.predict.wo.EA2[which(ix.EA2 %in% iy.EA2)])
```

```
##
## cat.predict.all disagree agree
##        disagree       15     1
##        agree           2    97
```