Current Question

My data

```
dsL<-readRDS("./Data/Derived/dsL.rds")
# color palette for the outcome
attcol8<-c("Never"="#4575b4",
           "Once or Twice"="#74add1",
           "Less than once/month"="#abd9e9",
           "About once/month"="#e0f3f8",
           "About twice/month"="#fee090",
           "About once/week"="#fdae61",
           "Several times/week"="#f46d43",
           "Everyday"="#d73027")
```

```
# view for one respondent
print (dsL[dsL$id==1,c("id","year","attend","attendF")])
```

```
   id year attend         attendF
1   1 1997     NA            <NA>
2   1 1998     NA            <NA>
3   1 1999     NA            <NA>
4   1 2000      1           Never
5   1 2001      6 About once/week
6   1 2002      2   Once or Twice
7   1 2003      1           Never
8   1 2004      1           Never
9   1 2005      1           Never
10  1 2006      1           Never
11  1 2007      1           Never
12  1 2008      1           Never
13  1 2009      1           Never
14  1 2010      1           Never
15  1 2011      1           Never
```

Creating frequency distributions for each of the measurement wave we have:

```
ds<- dsL
p<-ggplot(ds, aes(x=yearF, fill=attendF))
p<-p+ geom_bar(position="fill")
p<-p+ scale_fill_manual(values = attcol8,
                    name="Response category" )
p<-p+ scale_y_continuous("Prevalence: proportion of total",
                     limits=c(0, 1),
                     breaks=c(.1,.2,.3,.4,.5,.6,.7,.8,.9,1))
p<-p+ scale_x_discrete("Waves of measurement",
                   limits=as.character(c(2000:2011)))
p<-p+ labs(title=paste0("In the past year, how often have you attended a worship service?"))
p
```

Missing values are used in the calculation of total responses to show the natural attrition in the study. Assumming that attrition is not significantly associated with the outcome measure, we can remove missing values from the calculation of the total of responses and look at percentages that each response was endorsed at each time point.

```
ds<- dsL
p<-ggplot(subset(ds, !is.na(attendF)), aes(x=yearF, fill=attendF))
p<-p+ geom_bar(position="fill")
p<-p+ scale_fill_manual(values = attcol8,
                    name="Response category" )
p<-p+ scale_y_continuous("Prevalence: proportion of total",
                     limits=c(0, 1),
                     breaks=c(.1,.2,.3,.4,.5,.6,.7,.8,.9,1))
p<-p+ scale_x_discrete("Waves of measurement",
                   limits=as.character(c(2000:2011)))
p<-p+ labs(title=paste0("In the past year, how often have you attended a worship service?"))
p
```