

1116.R

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```
library(haven)
library(ggplot2)
library(data.table)
Tab <- function(data, var1, code, var2) {
  data <- as.data.frame(data)
  i <- which(names(data) == var1)
  j <- which(names(data) == var2)
  n <- nrow(data[data[, i] == code, ])
  tableA <- table(data[data[, i] == code, j])
  Table1 <- cbind(Freq. = tableA,
                  Percent = round(tableA / n * 100, 3),
                  Cum. = round(cumsum(tableA) / n * 100, 3)) |> data.frame()
  Table1 <- rbind(Table1, Total = c(sum(Table1$Freq.), round(sum(Table1$Percent), 0), ''))
  return(Table1)
}

tscs212 <- read_dta("~/Desktop/NCCU/111-1/1234/HW/tscs212.dta") |> setDT()
tscs212 <- (tscs212[!(e24a > 5 | e24b > 5 | e24c > 5 | e24d > 5 | e24e > 5), ]
           [, "MH" = (MH = e24a + e24b + e24c + e24d + e24e)])

cor(tscs212[, .(e24a, e24b, e24c, e24d, e24e)])
```

```
##           e24a      e24b      e24c      e24d      e24e
## e24a 1.0000000 0.6105912 0.4628381 0.4163958 0.4440856
## e24b 0.6105912 1.0000000 0.4557066 0.3518958 0.3565775
## e24c 0.4628381 0.4557066 1.0000000 0.7110378 0.6139077
## e24d 0.4163958 0.3518958 0.7110378 1.0000000 0.6951400
## e24e 0.4440856 0.3565775 0.6139077 0.6951400 1.0000000
```

```
data1 <- tscs212[, .(e24a, e24b, e24c, e24d, e24e, e24f, e24g, e24h, MH = as.factor(MH))]
```

```
# MH #
tableA <- table(data1[, MH])
tableB <- cumsum(tableA)
Table1 <- cbind(Freq. = tableA,
                Percent = round(tableA / nrow(data1) * 100, 2),
                Cum. = round(tableB / nrow(data1) * 100, 2)) |> data.frame()
Table1 <- rbind(Table1, Total = c(sum(Table1$Freq.), sum(Table1$Percent), ''))
Table1
```

```
##           Freq. Percent  Cum.
```

```
## 5      352    22.15 22.15
## 6      118     7.43 29.58
## 7      152     9.57 39.14
## 8      138     8.68 47.83
## 9      140     8.81 56.64
## 10     159    10.01 66.65
## 11     119     7.49 74.13
## 12     101     6.36 80.49
## 13     101     6.36 86.85
## 14      58     3.65 90.5
## 15      54      3.4 93.9
## 16      21     1.32 95.22
## 17      26     1.64 96.85
## 18      15     0.94 97.8
## 19       8      0.5 98.3
## 20       7     0.44 98.74
## 21       5     0.31 99.06
## 22       5     0.31 99.37
## 23       4     0.25 99.62
## 24       4     0.25 99.87
## 25       2     0.13 100
## Total 1589     100
```

```
# e24a #
Tab(data1, 'e24a', 1, 'MH')
```

```
##      Freq. Percent  Cum.
## 5      352  37.567 37.567
## 6      107  11.419 48.986
## 7      120  12.807 61.793
## 8      105  11.206 72.999
## 9      104  11.099 84.098
## 10      56   5.977 90.075
## 11      37   3.949 94.023
## 12      22   2.348 96.371
## 13      23   2.455 98.826
## 14       7   0.747 99.573
## 15       1   0.107 99.68
## 16       1   0.107 99.787
## 17       1   0.107 99.893
## 18       0      0 99.893
## 19       0      0 99.893
## 20       1   0.107 100
## 21       0      0 100
## 22       0      0 100
## 23       0      0 100
## 24       0      0 100
## 25       0      0 100
## Total   937    100
```

```
ggplot(data1[e24a == 1, .(MH = as.factor(MH))], aes(MH))+
  geom_bar()
```

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```
# e24b #  
Tab(data1, 'e24b', 1, 'MH')
```

##		Freq.	Percent	Cum.
## 5		352	56.683	56.683
## 6		62	9.984	66.667
## 7		66	10.628	77.295
## 8		56	9.018	86.312
## 9		25	4.026	90.338
## 10		22	3.543	93.881
## 11		17	2.738	96.618
## 12		11	1.771	98.39
## 13		1	0.161	98.551
## 14		4	0.644	99.195
## 15		1	0.161	99.356
## 16		2	0.322	99.678
## 17		1	0.161	99.839
## 18		1	0.161	100
## 19		0	0	100
## 20		0	0	100
## 21		0	0	100
## 22		0	0	100
## 23		0	0	100
## 24		0	0	100
## 25		0	0	100
## Total		621	100	

```
ggplot(data1[e24b == 1, .(MH = as.factor(MH))], aes(MH))+  
  geom_bar()
```

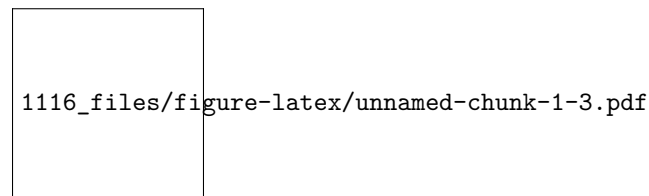
1116_files/figure-latex/unnamed-chunk-1-2.pdf

```
# e24c #  
Tab(data1, 'e24c', 1, 'MH')
```

##		Freq.	Percent	Cum.
## 5		352	56.866	56.866
## 6		88	14.216	71.082
## 7		89	14.378	85.46
## 8		34	5.493	90.953

```
## 9      26      4.2 95.153
## 10     9      1.454 96.607
## 11     9      1.454 98.061
## 12     6      0.969 99.031
## 13     2      0.323 99.354
## 14     2      0.323 99.677
## 15     1      0.162 99.838
## 16     1      0.162 100
## 17     0      0      100
## 18     0      0      100
## 19     0      0      100
## 20     0      0      100
## 21     0      0      100
## 22     0      0      100
## 23     0      0      100
## 24     0      0      100
## 25     0      0      100
## Total 619      100
```

```
ggplot(data1[e24c == 1, .(MH = as.factor(MH))], aes(MH))+
  geom_bar()
```

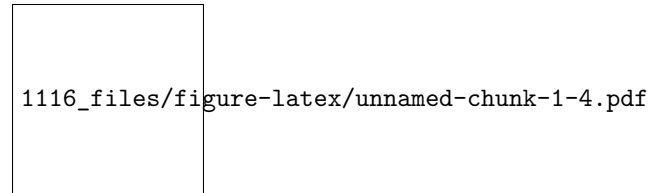


```
# e24d #
Tab(data1, 'e24d', 1, 'MH')
```

```
##      Freq. Percent  Cum.
## 5      352  42.308 42.308
## 6      112  13.462 55.769
## 7      133  15.986 71.755
## 8       73   8.774 80.529
## 9       56   6.731 87.26
## 10      42   5.048 92.308
## 11      34   4.087 96.394
## 12      11   1.322 97.716
## 13      11   1.322 99.038
## 14       4   0.481 99.519
## 15       2   0.24  99.76
## 16       1   0.12  99.88
## 17       1   0.12  100
## 18       0     0    100
## 19       0     0    100
## 20       0     0    100
## 21       0     0    100
## 22       0     0    100
## 23       0     0    100
## 24       0     0    100
```

```
## 25      0      0    100
## Total  832    100
```

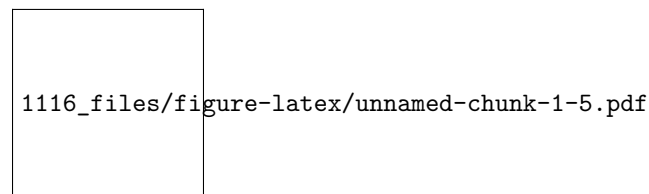
```
ggplot(data1[e24d == 1, .(MH = as.factor(MH))], aes(MH))+
  geom_bar()
```



```
# e24e #
Tab(data1, 'e24e', 1, 'MH')
```

##		Freq.	Percent	Cum.
## 5		352	44.11	44.11
## 6		103	12.907	57.018
## 7		117	14.662	71.679
## 8		71	8.897	80.576
## 9		58	7.268	87.845
## 10		35	4.386	92.231
## 11		36	4.511	96.742
## 12		10	1.253	97.995
## 13		13	1.629	99.624
## 14		0	0	99.624
## 15		1	0.125	99.749
## 16		0	0	99.749
## 17		1	0.125	99.875
## 18		0	0	99.875
## 19		0	0	99.875
## 20		0	0	99.875
## 21		1	0.125	100
## 22		0	0	100
## 23		0	0	100
## 24		0	0	100
## 25		0	0	100
## Total		798	100	

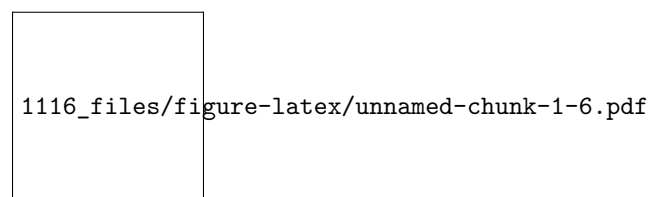
```
ggplot(data1[e24e == 1, .(MH = as.factor(MH))], aes(MH))+
  geom_bar()
```



```
# e24f #
Tab(data1, 'e24f', 5, 'MH')
```

##		Freq.	Percent	Cum.
## 5		334	44.18	44.18
## 6		90	11.905	56.085
## 7		108	14.286	70.37
## 8		66	8.73	79.101
## 9		56	7.407	86.508
## 10		35	4.63	91.138
## 11		30	3.968	95.106
## 12		16	2.116	97.222
## 13		13	1.72	98.942
## 14		6	0.794	99.735
## 15		1	0.132	99.868
## 16		1	0.132	100
## 17		0	0	100
## 18		0	0	100
## 19		0	0	100
## 20		0	0	100
## 21		0	0	100
## 22		0	0	100
## 23		0	0	100
## 24		0	0	100
## 25		0	0	100
## Total		756	100	

```
ggplot(data1[e24f == 5, .(MH = as.factor(MH))], aes(MH))+
  geom_bar()
```

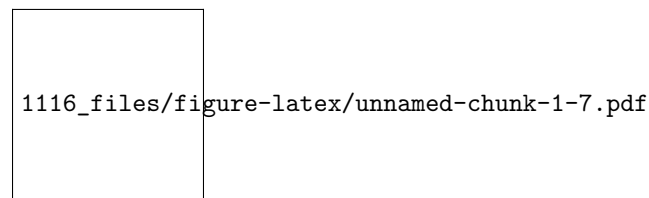


```
# e24g #
Tab(data1, 'e24g', 1, 'MH')
```

##		Freq.	Percent	Cum.
## 5		169	46.301	46.301
## 6		39	10.685	56.986
## 7		56	15.342	72.329
## 8		27	7.397	79.726
## 9		22	6.027	85.753
## 10		17	4.658	90.411
## 11		13	3.562	93.973
## 12		7	1.918	95.89
## 13		10	2.74	98.63
## 14		3	0.822	99.452
## 15		1	0.274	99.726

```
## 16      0      0 99.726
## 17      0      0 99.726
## 18      0      0 99.726
## 19      0      0 99.726
## 20      0      0 99.726
## 21      0      0 99.726
## 22      1 0.274 100
## 23      0      0 100
## 24      0      0 100
## 25      0      0 100
## Total 365      100
```

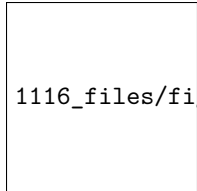
```
ggplot(data1[e24g == 1, .(MH = as.factor(MH))], aes(MH))+
  geom_bar()
```



```
# e24h #
Tab(data1, 'e24h', 1, 'MH')
```

```
##      Freq. Percent  Cum.
## 5      110   53.14  53.14
## 6       19   9.179 62.319
## 7       23  11.111 73.43
## 8       16   7.729 81.159
## 9       11   5.314 86.473
## 10      10   4.831 91.304
## 11       6   2.899 94.203
## 12       7   3.382 97.585
## 13       2   0.966 98.551
## 14       1   0.483 99.034
## 15       1   0.483 99.517
## 16       0      0 99.517
## 17       0      0 99.517
## 18       0      0 99.517
## 19       0      0 99.517
## 20       0      0 99.517
## 21       0      0 99.517
## 22       0      0 99.517
## 23       0      0 99.517
## 24       1   0.483 100
## 25       0      0 100
## Total 207      100
```

```
ggplot(data1[e24h == 1, .(MH = as.factor(MH))], aes(MH))+
  geom_bar()
```



1116_files/figure-latex/unnamed-chunk-1-8.pdf

```
#library(gmodels)  
#with(data1, CrossTable(e24c))
```