Frequency Tables

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28 June 2019

Front Matter

```
# read data
cidi_raw <-
  fread("ukrmain_RU_061419.csv")
```

```
# REPRODUCING THE FOUR CORE CONDITIONS; REGION VARIABLE; RELIGION GROUPING
cidi <-
  cidi_raw %>%
  filter(!is.na(de40)) %>%
  # religion
  mutate(de32_1 = ifelse(is.na(de32_1), 0, 1),
         de32_2 = ifelse(is.na(de32_2), 0, 1),
         de32_9 = ifelse(is.na(de32_9), 0, 1),
         de32_98 = ifelse(is.na(de32_98), 0, 1),
         de32_99 = ifelse(is.na(de32_99), 0, 1),
         de32_other = ifelse(de32_3|de32_4|de32_5|de32_6|de32_7|de32_8 == 1, 1, 0),
         de32_other = ifelse(is.na(de32_other), 0, 1),
         de34 = as.factor(ifelse(de34 == 8 | de34 == 9, 0, de34))) %>%
  # mental conditions
  mutate(affected_cher = ifelse(!is.na(dm40), dm40, de40),
         anx = ifelse(DSM_AGO == 1|DSM_SO == 1|DSM_GAD == 1|DSM_PDS == 1, 1, 0),
         ied = ifelse(DSM_IEDH == 1, 1, 0),
         aff = ifelse(DSM_MDE == 1|DSM_DYS == 1, 1, 0),
         alc = ifelse(DSM_ALA == 1|DSM_ALD == 1, 1, 0),
         any = ifelse(anx == 1|ied == 1|aff == 1|alc == 1, 1, 0),
         oblast = as.factor(io15)) %>%
  # 8 region variable
  mutate(region8 = derivedFactor(East = io15 == 7|io15 == 13,
                                 Eastcentral = io15 == 21|io15 == 10|io15 == 6,
                                 Krym = io15 == 1,
                                 South = io15 == 22|io15 == 15|io15 == 16,
                                 Northcentral = io15 == 26|io15 == 19|io15 == 17|io15 == 24|io15 == 12|
                                 Westcentral = io15 == 23|io15 == 8|io15 == 4|io15 == 18|io15 == 5,
                                 West = io15 == 11|io15 == 14|io15 == 20,
                                 Southwest = io15 == 25|io15 == 9)) %>%
  select(sampleid, affected_cher, anx, ied, aff, alc, any,
         de32_1, de32_2, de32_other, de32_98, de32_99, oblast, region8,
         secu, strata, weight2)
```

```
# Dataset with Part 2 weights on
DesignPt2 <-
  svydesign(ids = ~secu, strata = ~strata, weights = ~weight2, nest = T,
            data = subset(cidi, cidi$weight2>0))
options(survey.lonely.psu = "adjust")
```

Prevalence of Disorders by 8 Regions Grouping

While the 8-region grouping in the Barrington and Herron paper makes sense and is explained well, I am concerned that this creates insufficient sample sizes for those with mental disorders in each region.

```
# anx
# svyglm(anx~oblast, design = DesignPt2, family = quasibinomial()) %>%
#   summary
svytable(~anx + region8, design = DesignPt2) %>%
  addmargins %>%
  round()
```

```
##      region8
## anx   East Eastcentral Krym South Northcentral Westcentral West Southwest
##   0    214         290   56   179          375         246  144        75
##   1      7          54    8    20           28          12   10         2
##   Sum  221         343   64   199          404         258  154        77
##      region8
## anx    Sum
##   0   1579
##   1    141
##   Sum 1720
```

```
# alc
# svyglm(alc~oblast, design = DesignPt2, family = quasibinomial()) %>%
#   summary
svytable(~alc + region8, design = DesignPt2) %>%
  addmargins %>%
  round()
```

```
##      region8
## alc   East Eastcentral Krym South Northcentral Westcentral West Southwest
##   0    185         298   50   161          352         232  124        67
##   1     36          45   14    38           51          27   30        10
##   Sum  221         343   64   199          404         258  154        77
##      region8
## alc    Sum
##   0   1469
##   1    251
##   Sum 1720
```

```
# aff
# svyglm(aff~oblast, design = DesignPt2, family = quasibinomial()) %>%
#   summary
svytable(~aff + region8, design = DesignPt2) %>%
  addmargins %>%
  round()
```

```
##      region8
## aff   East Eastcentral Krym South Northcentral Westcentral West Southwest
##   0    187         256   49   182          335         215  128        69
##   1     34          87   15    18           68          44   26         8
```

```
##   Sum  221         343   64   199          404         258  154        77
##      region8
## aff    Sum
##   0   1421
##   1    299
##   Sum 1720
```

```
# ied
# svyglm(ied~oblast, design = DesignPt2, family = quasibinomial()) %>%
#   summary
svytable(~ied + region8, design = DesignPt2) %>%
  addmargins %>%
  round()
```

```
##      region8
## ied   East Eastcentral Krym South Northcentral Westcentral West Southwest
##   0    216         331   58   184          384         251  144        76
##   1      5          12    6    15           19           7   10         0
##   Sum  221         343   64   199          404         258  154        77
##      region8
## ied    Sum
##   0   1644
##   1     76
##   Sum 1720
```

```
# any
# svyglm(any~oblast, design = DesignPt2, family = quasibinomial()) %>%
#   summary
svytable(~any + region8, design = DesignPt2) %>%
  addmargins() %>%
  round()
```

```
##      region8
## any   East Eastcentral Krym South Northcentral Westcentral West Southwest
##   0    154         197   34   135          277         183   88        59
##   1     67         146   30    64          126          76   66        17
##   Sum  221         343   64   199          404         258  154        77
##      region8
## any    Sum
##   0   1128
##   1    592
##   Sum 1720
```

Prevalence of Disorders By Oblast

```
# anx
# svyglm(anx~oblast, design = DesignPt2, family = quasibinomial()) %>%
#   summary
svytable(~anx + oblast, design = DesignPt2) %>%
  addmargins %>%
  round()
```

```
##      oblast
## anx      1    2    3    4    5    6    7    8    9   10   11   12   13
##   0     56   85   68   66   51  108  129   54   52   59   42   43   84
##   1      8    9    5    1    0   16    3    9    1    6    3    4    4
##   Sum   64   93   73   66   51  124  132   63   53   65   45   47   89
##      oblast
## anx     14   15   16   17   18   19   20   21   22   23   24   25   26
##   0     65   53   91   50   43   40   37  122   36   32   41   23   49
##   1      6   10    9    3    1    3    1   32    2    2    3    0    2
##   Sum   71   63   99   53   44   42   38  154   37   34   43   23   51
##      oblast
## anx    Sum
##   0   1579
##   1    141
##   Sum 1720
```

```
# alc
# svyglm(alc~oblast, design = DesignPt2, family = quasibinomial()) %>%
#   summary
svytable(~alc + oblast, design = DesignPt2) %>%
  addmargins %>%
  round()
```

```
##      oblast
## alc      1    2    3    4    5    6    7    8    9   10   11   12   13
##   0     50   82   58   51   49  104  108   59   49   53   32   37   77
##   1     14   11   15   15    3   20   24    5    5   12   13   10   12
##   Sum   64   93   73   66   51  124  132   63   53   65   45   47   89
##      oblast
## alc     14   15   16   17   18   19   20   21   22   23   24   25   26
##   0     61   50   75   52   41   41   31  141   36   32   39   18   44
##   1      9   13   24    1    2    1    8   13    2    2    5    5    7
##   Sum   71   63   99   53   44   42   38  154   37   34   43   23   51
##      oblast
## alc    Sum
##   0   1469
##   1    251
##   Sum 1720
```

```
# aff
# svyglm(aff~oblast, design = DesignPt2, family = quasibinomial()) %>%
#   summary
svytable(~aff + oblast, design = DesignPt2) %>%
  addmargins %>%
  round()
```

```
##      oblast
## aff      1    2    3    4    5    6    7    8    9   10   11   12   13
##   0     49   76   54   59   50  110  114   40   50   42   36   40   74
##   1     15   17   20    8    1   13   18   24    3   23    9    7   15
##   Sum   64   93   73   66   51  124  132   63   53   65   45   47   89
##      oblast
## aff     14   15   16   17   18   19   20   21   22   23   24   25   26
```

```
##   0     59   57   89   41   42   41   33  104   35   24   36   19   47
##   1     12    5   10   12    1    1    6   51    2   10    8    5    4
##   Sum   71   63   99   53   44   42   38  154   37   34   43   23   51
##       oblast
## aff    Sum
##   0   1421
##   1    299
##   Sum 1720
```

```
# ied
# svyglm(ied~oblast, design = DesignPt2, family = quasibinomial()) %>%
#   summary
svytable(~ied + oblast, design = DesignPt2) %>%
  addmargins %>%
  round()
```

```
##       oblast
## ied      1    2    3    4    5    6    7    8    9   10   11   12   13
##   0     58   86   67   66   49  121  129   60   53   62   38   45   87
##   1      6    8    6    1    2    3    3    4    0    3    7    2    2
##   Sum   64   93   73   66   51  124  132   63   53   65   45   47   89
##       oblast
## ied     14   15   16   17   18   19   20   21   22   23   24   25   26
##   0     68   60   88   53   44   42   38  149   36   33   43   23   49
##   1      3    3   11    0    0    1    0    5    1    1    0    0    2
##   Sum   71   63   99   53   44   42   38  154   37   34   43   23   51
##       oblast
## ied    Sum
##   0   1644
##   1     76
##   Sum 1720
```

```
# any
# svyglm(any~oblast, design = DesignPt2, family = quasibinomial()) %>%
#   summary
svytable(~any + oblast, design = DesignPt2) %>%
  addmargins() %>%
  round()
```

```
##       oblast
## any      1    2    3    4    5    6    7    8    9   10   11   12   13
##   0     34   63   37   44   46   84   92   32   45   31   17   29   62
##   1     30   30   36   23    5   40   39   32    8   35   28   18   27
##   Sum   64   93   73   66   51  124  132   63   53   65   45   47   89
##       oblast
## any     14   15   16   17   18   19   20   21   22   23   24   25   26
##   0     46   39   62   38   39   39   25   82   34   22   32   15   39
##   1     25   23   38   15    4    3   13   72    3   12   12    9   12
##   Sum   71   63   99   53   44   42   38  154   37   34   43   23   51
##       oblast
## any    Sum
##   0   1128
##   1    592
##   Sum 1720
```

Frequency Counts of Mental Disorders

```
# mental disorder frequency counts
svytable(~anx, design = DesignPt2) %>%
  addmargins() %>%
  round()
```

```
## anx
##    0    1  Sum
## 1579  141 1720
```

```
svytable(~aff, design = DesignPt2) %>%
  addmargins() %>%
  round()
```

```
## aff
##    0    1  Sum
## 1421  299 1720
```

```
svytable(~alc, design = DesignPt2) %>%
  addmargins() %>%
  round()
```

```
## alc
##    0    1  Sum
## 1469  251 1720
```

```
svytable(~ied, design = DesignPt2) %>%
  addmargins() %>%
  round()
```

```
## ied
##    0    1  Sum
## 1644   76 1720
```

```
svytable(~any, design = DesignPt2) %>%
  addmargins() %>%
  round()
```

```
## any
##    0    1  Sum
## 1128  592 1720
```

Mental Disorders by Religion

```r
# anxiety and religion
svytable(~anx + de32_1, design = DesignPt2) %>%
  addmargins() %>%
  round()
```

```
##      de32_1
## anx      0    1  Sum
##   0    621  958 1579
##   1     52   89  141
##   Sum  672 1048 1720
```

```r
svytable(~anx + de32_2, design = DesignPt2) %>%
  addmargins() %>%
  round()
```

```
##      de32_2
## anx      0    1  Sum
##   0   1476  103 1579
##   1    132    9  141
##   Sum 1608  112 1720
```

```r
svytable(~anx + de32_other, design = DesignPt2) %>%
  addmargins() %>%
  round()
```

```
##      de32_other
## anx      0    1  Sum
##   0   1322  257 1579
##   1    116   25  141
##   Sum 1438  282 1720
```

```r
# affective and religion
svytable(~aff + de32_1, design = DesignPt2) %>%
  addmargins() %>%
  round()
```

```
##      de32_1
## aff      0    1  Sum
##   0    557  864 1421
##   1    116  183  299
##   Sum  672 1048 1720
```

```r
svytable(~aff + de32_2, design = DesignPt2) %>%
  addmargins() %>%
  round()
```

```
##      de32_2
## aff      0    1  Sum
##   0   1329   92 1421
##   1    280   20  299
##   Sum 1608  112 1720
```

```r
svytable(~aff + de32_other, design = DesignPt2) %>%
  addmargins() %>%
  round()
```

```
##      de32_other
## aff      0    1  Sum
##   0   1197  224 1421
##   1    241   58  299
##   Sum 1438  282 1720
```

```r
# alcohol and religion
svytable(~alc + de32_1, design = DesignPt2) %>%
  addmargins() %>%
  round()
```

```
##      de32_1
## alc      0    1  Sum
##   0    553  916 1469
##   1    119  132  251
##   Sum  672 1048 1720
```

```r
svytable(~alc + de32_2, design = DesignPt2) %>%
  addmargins() %>%
  round()
```

```
##      de32_2
## alc      0    1  Sum
##   0   1368  100 1469
##   1    240   12  251
##   Sum 1608  112 1720
```

```r
svytable(~alc + de32_other, design = DesignPt2) %>%
  addmargins() %>%
  round()
```

```
##      de32_other
## alc      0    1  Sum
##   0   1239  230 1469
##   1    199   52  251
##   Sum 1438  282 1720
```

```r
# ied and religion
svytable(~ied + de32_1, design = DesignPt2) %>%
  addmargins() %>%
  round()
```

```
##      de32_1
## ied      0    1  Sum
##   0    636 1008 1644
##   1     36   40   76
##   Sum  672 1048 1720
```

```r
svytable(~ied + de32_2, design = DesignPt2) %>%
  addmargins() %>%
  round()
```

```
##      de32_2
## ied      0    1  Sum
##   0   1537  107 1644
##   1     71    5   76
##   Sum 1608  112 1720
```

```r
svytable(~ied + de32_other, design = DesignPt2) %>%
  addmargins() %>%
  round()
```

```
##      de32_other
## ied      0    1  Sum
##   0   1373  271 1644
##   1     64   12   76
##   Sum 1438  282 1720
```

```r
# any and religion
svytable(~any + de32_1, design = DesignPt2) %>%
  addmargins() %>%
  round()
```

```
##      de32_1
## any      0    1  Sum
##   0    424  704 1128
##   1    248  344  592
##   Sum  672 1048 1720
```

```r
svytable(~any + de32_2, design = DesignPt2) %>%
  addmargins() %>%
  round()
```

```
##      de32_2
## any      0    1  Sum
##   0   1054   74 1128
##   1    554   38  592
##   Sum 1608  112 1720
```

```r
svytable(~any + de32_other, design = DesignPt2) %>%
  addmargins() %>%
  round()
```

```
##      de32_other
## any      0    1  Sum
##   0    957  171 1128
##   1    481  111  592
##   Sum 1438  282 1720
```