Turning Points Codebook

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Contents

0.0.1 Missing Data Rule

- For scales with 10 or more items, a composite score (average/total) is computed for **TC** that have less than 20% of the items from that measure missing
- For scales with 7 to 9 items, a composite score (average/total) is computed for **TC** that have less than 30% of the items from that measure missing
- For scales with 3 to 6 items, a composite score (average/total) is computed for **TC** that have less than 33% of the items from that measure missing
- For scales with only 2 items, composite scores (average/total) are calculated on a case by case basis

1 Mental Health

1.1 BSI

1.1.1 BSI Description

- Variables for BSI scale
  - `bsi1`, `bsi2`, `bsi3`, `bsi4`, `bsi5`, `bsi6`, `bsi7`, `bsi8`, `bsi9`, `bsi10`, `bsi11`, `bsi12`, `bsi13`, `bsi14`, `bsi15`, `bsi16`, `bsi17`, `bsi18`, `bsi19`
  - Variable Scale
    - 0 - "Not at all"
    - 1 - "A little bit"
    - 2 - "Moderately"
    - 3 - "Quite a bit"
    - 4 - "Very much"
- Total scores should range from 0 to 76
- Revere Scoring
  - N/A
- Subscales
  - Somatization: `bsi2`, `bsi3`, `bsi10`, `bsi11`, `bsi12`, `bsi13`, `bsi15`
  - Anxiety: `bsi1`, `bsi5`, `bsi9`, `bsi16`, `bsi17`, `bsi18`
  - Depression: `bsi4`, `bsi6`, `bsi7`, `bsi8`, `bsi14`, `bsi19`
- Missing Data Rule:
  - N/A
- Reference: Derogatis and Melisaratos (1983)

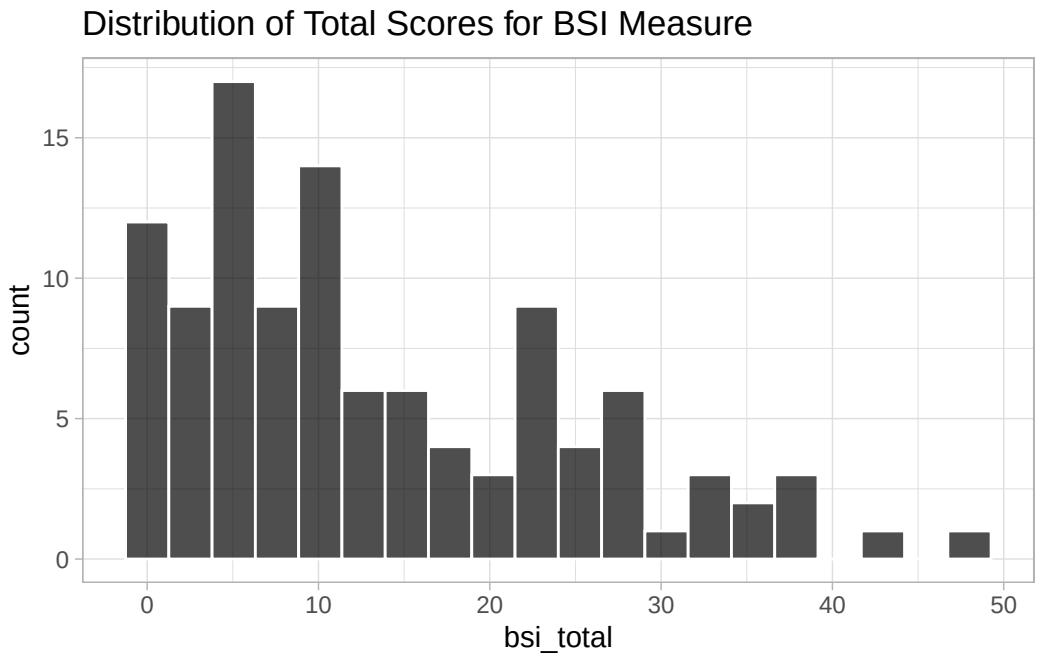
1.1.2 BSI Missing Data

```
data %>%
  select(
    id:bsi19
  ) %>%
  pct_miss_fun(
    id = 'id',
    n_items = 19
  )
```

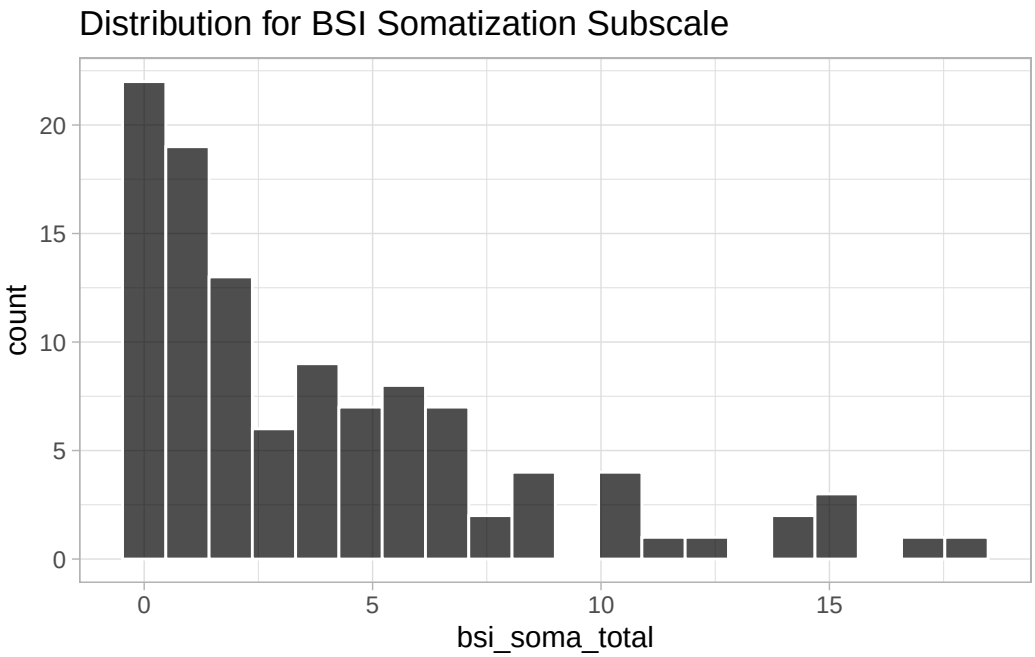
```
# A tibble: 0 x 3
# ... with 3 variables: id <chr>, missing_n <int>, miss_pct <dbl>
# i Use `colnames()` to see all variable names
```

1.1.3 BSI Scale & Subscale Distributions

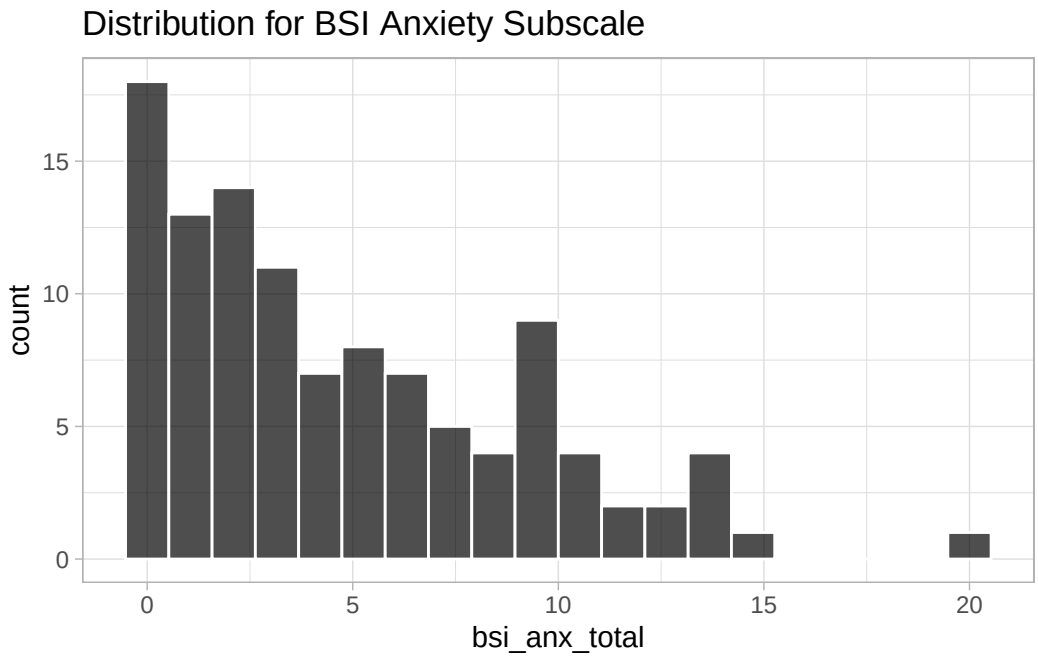
```
complete %>%
  composite_hist(
    x = bsi_total
  ) +
  labs(title = 'Distribution of Total Scores for BSI Measure')
```



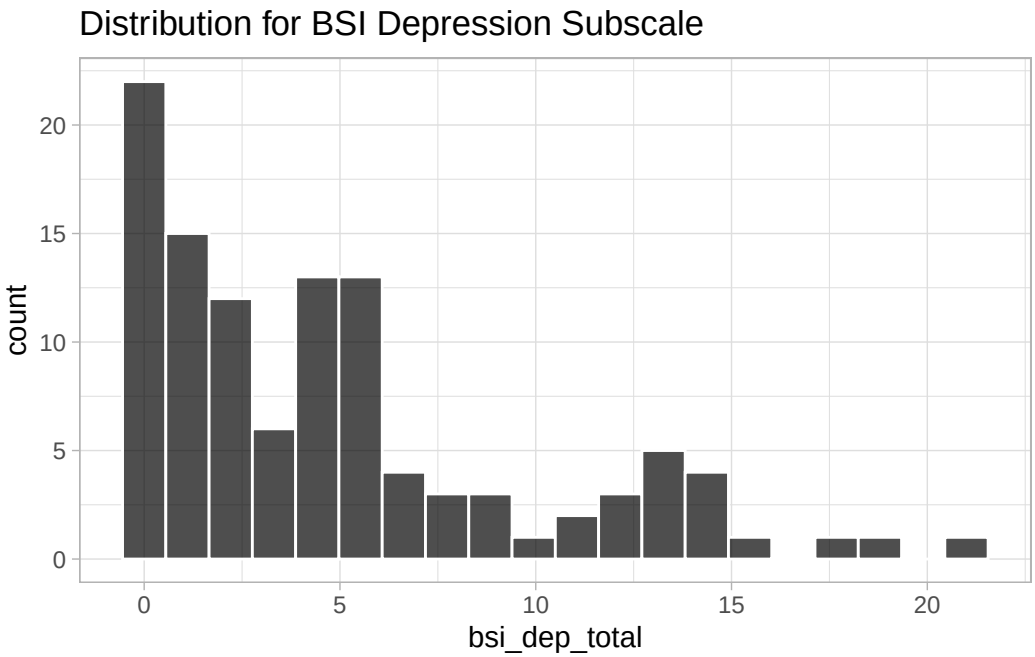

```
complete %>%
  composite_hist(x = bsi_soma_total) +
  labs(title = 'Distribution for BSI Somatization Subscale')
```




```
complete %>%
  composite_hist(x = bsi_anx_total) +
  labs(title = 'Distribution for BSI Anxiety Subscale')
```




```
complete %>%
  composite_hist(x = bsi_dep_total) +
  labs(title = 'Distribution for BSI Depression Subscale')
```



1.1.4 BSI Internal Reliability

Alpha Values for BSI Entire Scale & Subscales

Scale	Alpha
BSI	0.885
BSI - Somatization	0.741
BSI - Anxiety	0.795
BSI - Depression	0.849

1.2 CESD

1.2.1 CESD Description

- Variables for CESD scale
  - `c1`, `c2`, `c3`, `c4`, `c5`, `c6`, `c7`, `c8`, `c9`, `c10`, `c11`, `c12`, `c13`, `c14`, `c15`, `c16`, `c17`, `c18`, `c19`, `c20`
  - Variable Scale
    - 0 - "Rarely or none of the time"

        * 1 - “Some or a little of the time”
        * 2 - “Occasionally or a moderate amount of time”
        * 3 - “Most or all of the time”
- Total scores should range from `0` to `60`
- Revere Scoring
    - Items `c4`, `c8`, `c12`, and `c16` are reverse scored
- Variables For Other Items
    - `c21`, `c22`, `c23`, `c24`
        * if response is `No` to item `c21`, then TC moved on to item `c24`
    - Variable Scale
        * 0 - No
        * 1 - Yes
        * 2 - Declined to Answer
- Subscales
    - Positive Affect
        * `c4_r`, `c8_r`, `c12_r`, `c16_r`
    - Depressive Symptoms
        * `c1`, `c2`, `c3`, `c5`, `c6`, `c7`, `c9`, `c10`, `c11`, `c13`, `c14`, `c15`, `c17`, `c18`, `c19`, `c20`
- Missing Data Rule:
    - N/A
- Reference: Radloff (1977)
    - Additional References:
        * Cutoff Information: Henry, Grant, and Cropsey (2018)
        * Items for Potential Subscales: Canady, Stommel, and Holzman (2009)

1.2.2 CESD Missing Data

```
data %>%
  select(id,
         c1:c20,
         c4_r:c16_r) %>%
  pct_miss_fun(
    id = 'id',
    n_items = 20
  ) %>%
  gt::gt() %>%
  gt::tab_header(
    title = 'Missing Data',
    subtitle = 'By Each Participant'
  )
```

Missing Data
By Each Participant

id	missing_n	miss_pct
P858	2	10
HR204	1	5

Missing data for suicidal ideation, plan, and attempt items.

```
data %>%
  select(id,
         c21:c24) %>%
  pct_miss_fun(
    id = 'id',
    n_items = 20
  ) %>%
  gt::gt() %>%
  gt::tab_header(
    title = 'Missing Data',
    subtitle = 'By Each Participant'
  )
```

Missing Data
By Each Participant

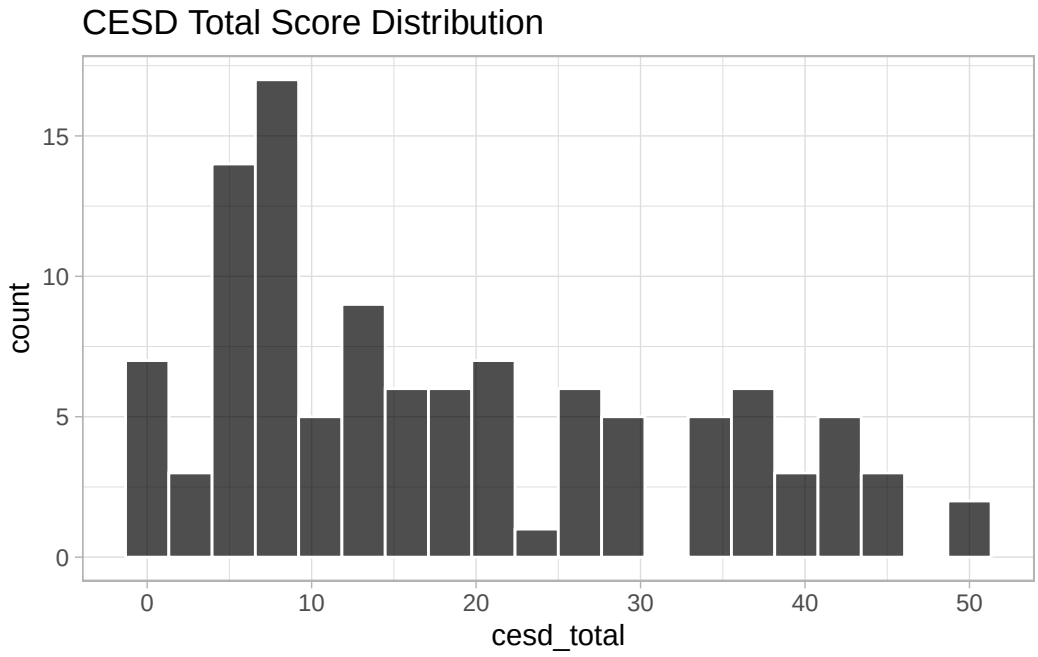
id	missing_n	miss_pct
HR208	3	15
P849	3	15
HR103	2	10
HR108	2	10
HR113	2	10
HR114	2	10
HR117	2	10
HR119	2	10
HR120	2	10
HR124	2	10
HR128	2	10
HR131	2	10
HR132	2	10
HR133	2	10
HR135	2	10
HR139	2	10
HR140	2	10
HR141	2	10
HR143	2	10
HR144	2	10
HR147	2	10
HR150	2	10
HR153	2	10
HR162	2	10
HR163	2	10
HR172	2	10
HR175	2	10
HR176	2	10
HR177	2	10
HR179	2	10
HR185	2	10
HR186	2	10
HR199	2	10
HR200	2	10
HR204	2	10
HR210	2	10
HR212	2	10
HR216	2	10
HR219	2	10
HR223	2	10
P802	2	10

P803	2	10
P805	2	10
P806	2	10
P815	2	10
P816	2	10
P818	2	10
P821	2	10
P822	2	10
P824	2	10
P826	2	10
P828	2	10
P829	2	10
P830	2	10
P832	2	10
P833	2	10
P836	2	10
P844	2	10
P846	2	10
P847	2	10
P854	2	10
P855	2	10
P856	2	10
P858	2	10
P859	2	10
P860	2	10
P861	2	10
P862	2	10
P863	2	10
P864	2	10
P865	2	10
P866	2	10
P867	2	10
P868	2	10
P869	2	10
P871	2	10
P874	2	10
P875	2	10
P880	2	10
P882	2	10
P884	2	10
P885	2	10
P888	2	10
P893	2	10

P894	2	10
P898	2	10
P899	2	10
P900	2	10
P901	2	10
P902	2	10
P813	1	5

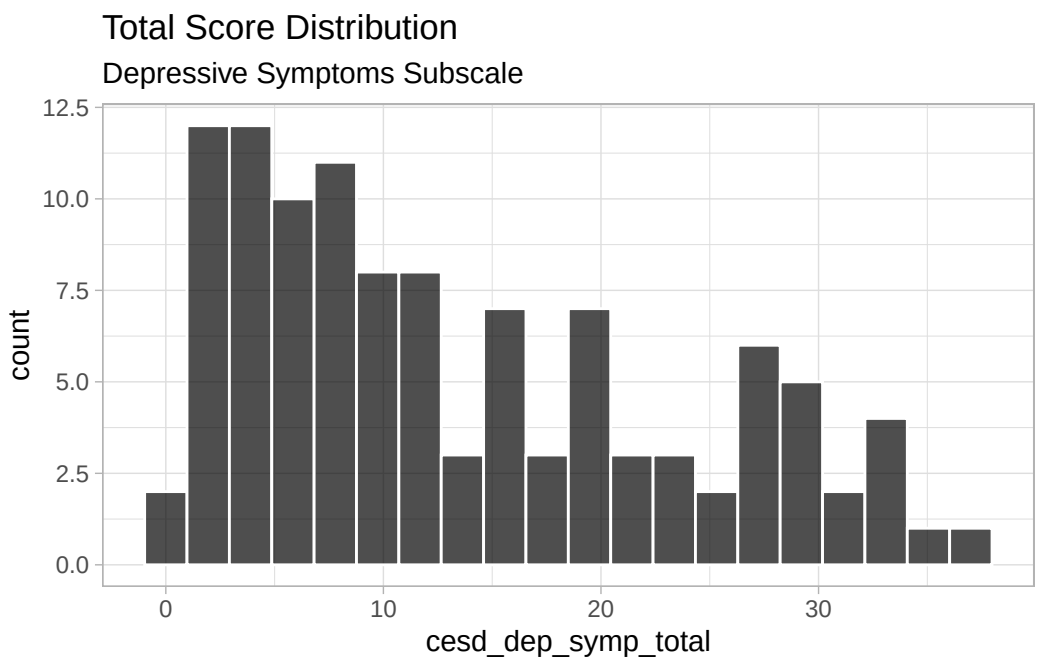
1.2.3 CESD Scale & Suscale Distributions

```
complete %>%
  composite_hist(cesd_total) +
  labs(
    title = 'CESD Total Score Distribution'
    )
```

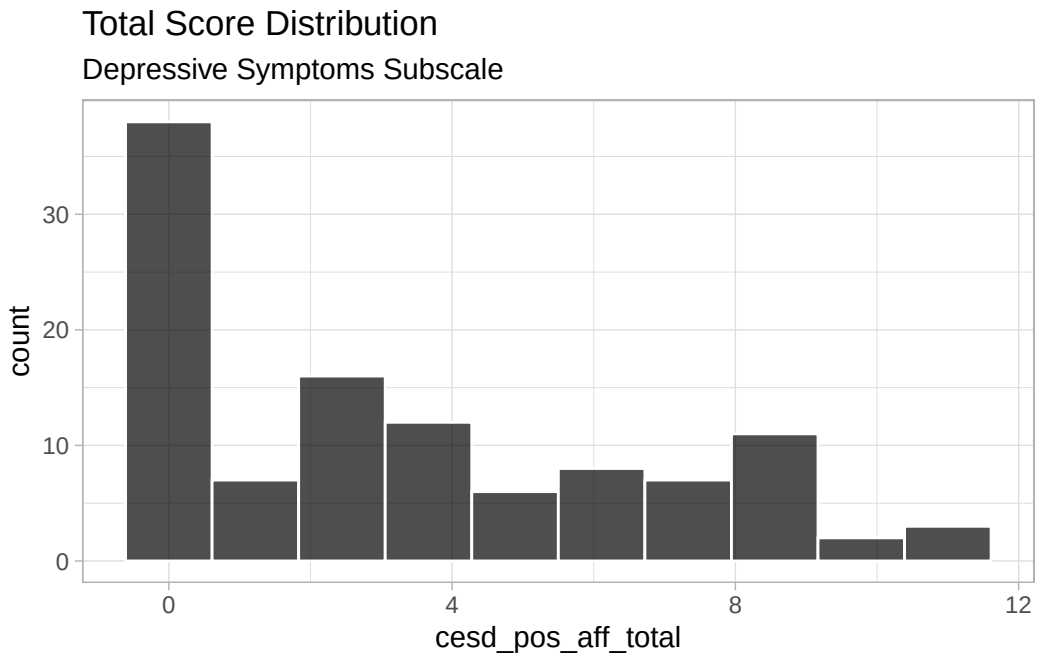



```
complete %>%
  composite_hist(
    cesd_dep_symp_total
    ) +
```

```
  labs(
    title = 'Total Score Distribution',
       subtitle = 'Depressive Symptoms Subscale'
    )
```

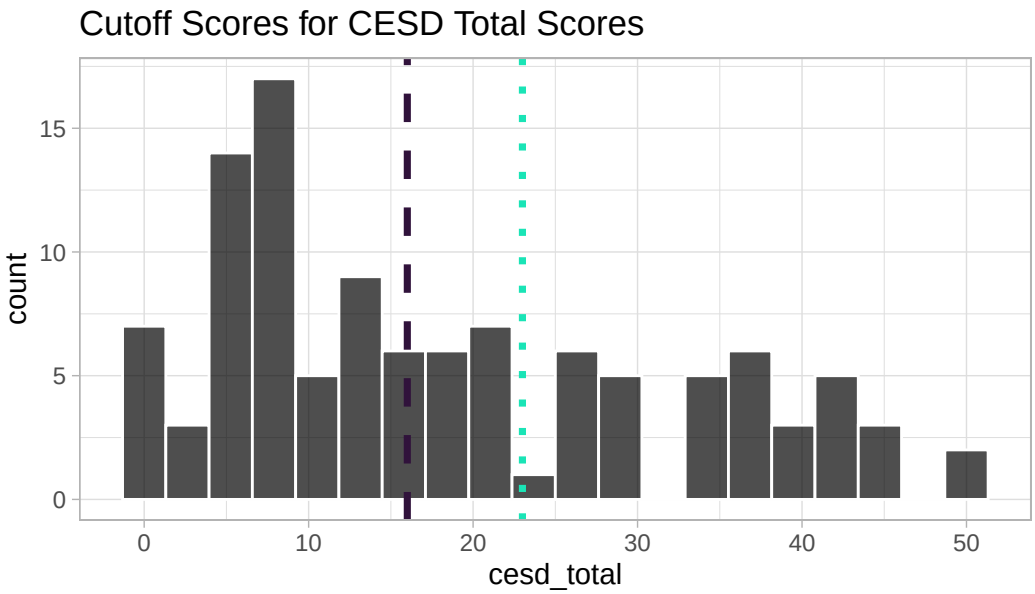



```
complete %>%
  composite_hist(
    cesd_pos_aff_total,
    bins = 10
    ) +
  labs(
    title = 'Total Score Distribution',
       subtitle = 'Depressive Symptoms Subscale'
    )
```



1.2.4 CESD Cutoffs

```
complete %>%
  cutoff_plot(
    x = cesd_total,
    cutoff = 16,
    cutoff_other = 23
  ) +
  labs(
    title = 'Cutoff Scores for CESD Total Scores',
    caption = 'Cutoffs are 16 and/or 23\nSee references for literature on cutoff scores.'
  )
```



Cutoffs are 16 and/or 23
See references for literature on cutoff scores.

1.2.5 CESD Internal Reliability

```
cesd_alpha <-
  complete %>%
  select(c1:c16_r) %>%
  psych::alpha(check.keys = TRUE)

cesd_dep_alpha <-
  complete %>%
  select(c1:c20) %>%
  psych::alpha(check.keys = TRUE)

cesd_pos_aff_alpha <-
  complete %>%
  select(c4_r, c8_r, c12_r, c16_r) %>%
  psych::alpha(check.keys = TRUE)


cesd_alpha_table <- tibble(
  Scale = c('CESD', 'CESD - Depressive Symptoms',
            'CESD - Positive Affect'),
```

```
  Alpha = c(round(cesd_alpha$total$raw_alpha, 3),
            round(cesd_dep_alpha$total$raw_alpha, 3),
            round(cesd_pos_aff_alpha$total$raw_alpha, 3)
  )
)

cesd_alpha_table %>%
  gt::gt() %>%
  gt::tab_header(
    title = 'Alpha Values for CESD Entire Scale & Subscales'
  )
```

Alpha Values for CESD Entire Scale & Subscales

Scale	Alpha
CESD	0.937
CESD - Depressive Symptoms	0.917
CESD - Positive Affect	0.882

2 COVID-19

2.1 CIQ

2.1.1 CIQ Description

- Variables for BSI COVID-19 items
  - `ciq1`, `ciq2`, `ciq3`
  - Variable Scale
    - 1 - "Not true of me at all"
    - 2
    - 3
    - 4
    - 5
    - 6
    - 7 - "Very true of me"

- Total score should range from 3 to 21
- Reverse Scoring
  - item `ciq3` should be reverse scored
- Reference: Conway III, Woodard, and Zubrod (2020)

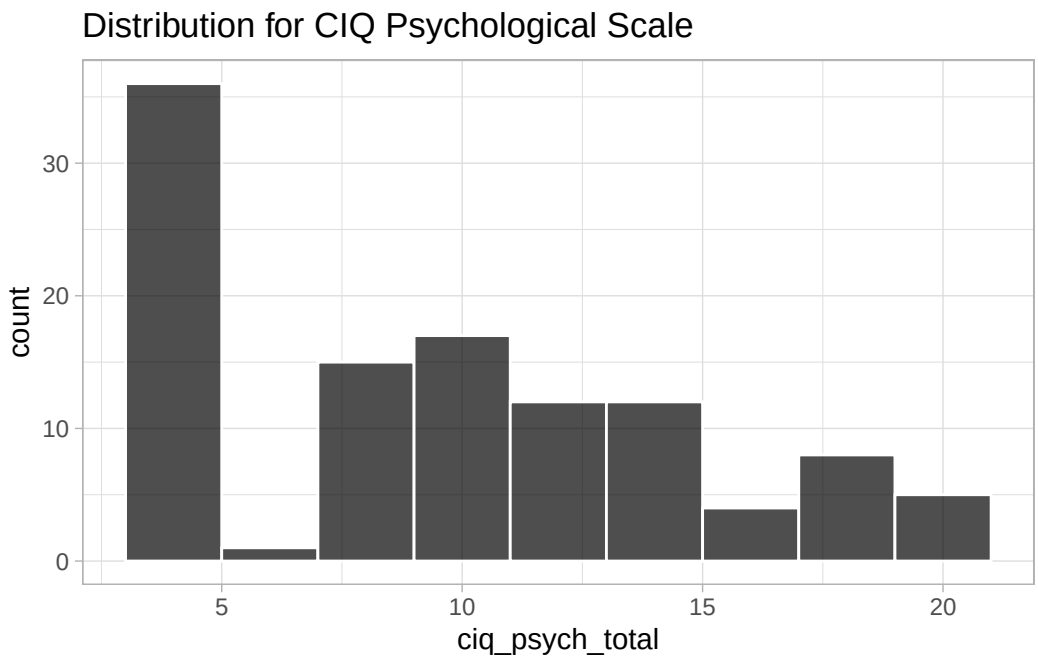
2.1.2 CIQ Missing Data

```
data %>%
  select(id,
         ciq1:ciq3_r) %>%
  pct_miss_fun(
    id = 'id',
    n_items = 3
  )
```

```
# A tibble: 0 x 3
# ... with 3 variables: id <chr>, missing_n <int>, miss_pct <dbl>
# i Use `colnames()` to see all variable names
```

2.1.3 CIQ Scale Distribution

```
complete %>%
  composite_hist(
    x = ciq_psych_total,
    bins = 10
    ) +
  labs(title = 'Distribution for CIQ Psychological Scale')
```



2.1.4 CIQ Internal Reliability

```
ciq_alpha <-
  complete %>%
  select(ciq1, ciq2, ciq3_r) %>%
  psych::alpha(check.keys = TRUE)

ciq_alpha_table <- tibble(
  Scale = 'CIQ - Psychological Scale',
  Alpha = round(ciq_alpha$total$raw_alpha, 3)
)

ciq_alpha_table %>%
 gt::gt() %>%
  gt::tab_header(
    title = 'Alpha Values for CIQ - Psychological Scale'
  )
```

Alpha Values for CIQ - Psychological Scale

Scale	Alpha

3 Substance Use

3.1 DAST

3.1.1 DAST Description

- Variables for DAST scale
  - `d00`, `d1a`, `d2a`, `d2b`, `d3`, `d4`, `d5`, `d6`, `d7`, `d8`, `d9`, `d10`, `d11`, `d12`, `d13`, `d14`, `d15`, `d16`, `d17`, `d18`, `d19`, `d20`
  - Variable scale
    - 1 - "Yes"
    - 0 - "No"
  - Total scores should range from `0` to `20`
  - Reverse scoring
    - Items `d4` and `d5` are reverse coded
    - both were renamed to `d4_r` and `d5_r` respectively
  - `d2a` and `d2b` are skip logic questions based on responses for `d1a`
    - `d1a = 1` moved on to respond to `d2a`
    - `d1a = 0` or `d1a = -77` moved on to respond to `d2b`
- Subscales
  - No subscales were created for this measure as there was a lack of evidence supporting a subscale structure
- Missing Data Rule:
  - Applied. Calculations were completed only with participants that had less then 20% missing data (this includes `-77` responses)
- Reference: Gavin, Ross, and Skinner (1989)

3.1.2 DAST Missing Data

```
data %>%
  select(
    id,
    d1a:d3,
    d6:d5_r
         ) %>%
  pct_miss_fun(
    id = 'id',
    n_items = 21
  ) %>%
  gt::gt() %>%
  gt::tab_header(
    title = 'DAST Missing Data',
    subtitle = 'By Participant'
  )
```

DAST Missing Data
By Participant

id	missing_n	miss_pct
HR119	21	100.000000
HR131	21	100.000000
HR185	21	100.000000
HR208	21	100.000000
P816	21	100.000000
P824	21	100.000000
P860	21	100.000000
P882	21	100.000000
HR103	19	90.476190
HR108	19	90.476190
HR113	19	90.476190
HR117	19	90.476190
HR120	19	90.476190
HR124	19	90.476190
HR128	19	90.476190
HR133	19	90.476190
HR139	19	90.476190
HR140	19	90.476190
HR141	19	90.476190
HR144	19	90.476190

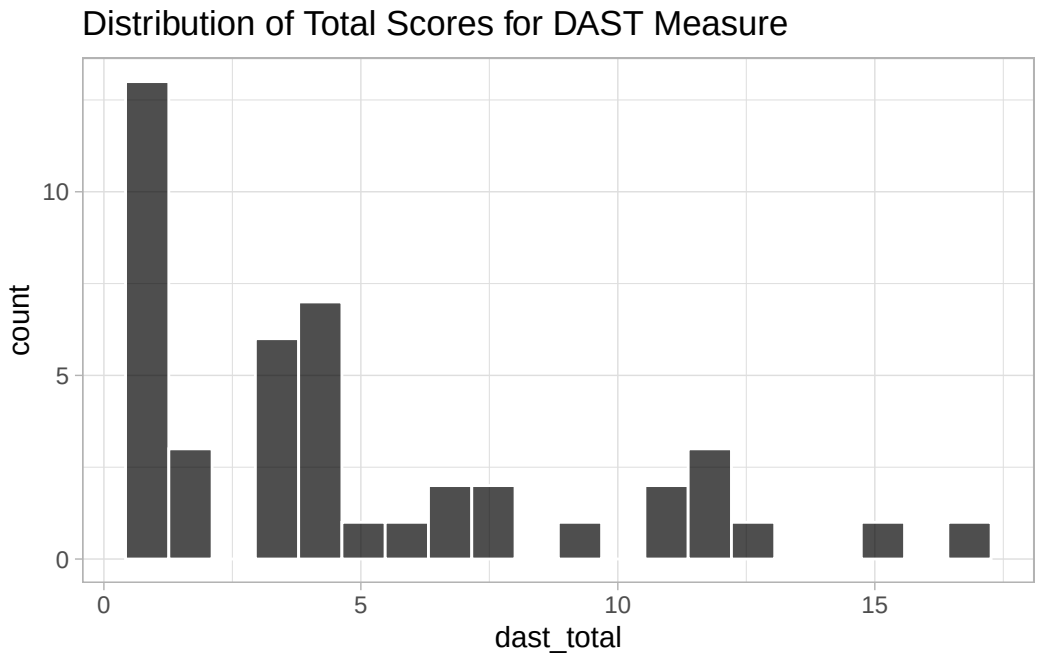
HR147	19	90.476190
HR150	19	90.476190
HR153	19	90.476190
HR156	19	90.476190
HR175	19	90.476190
HR176	19	90.476190
HR177	19	90.476190
HR178	19	90.476190
HR186	19	90.476190
HR200	19	90.476190
HR210	19	90.476190
HR212	19	90.476190
HR214	19	90.476190
HR216	19	90.476190
HR219	19	90.476190
HR223	19	90.476190
P813	19	90.476190
P815	19	90.476190
P818	19	90.476190
P821	19	90.476190
P822	19	90.476190
P828	19	90.476190
P829	19	90.476190
P832	19	90.476190
P833	19	90.476190
P836	19	90.476190
P846	19	90.476190
P849	19	90.476190
P854	19	90.476190
P855	19	90.476190
P856	19	90.476190
P858	19	90.476190
P859	19	90.476190
P862	19	90.476190
P864	19	90.476190
P866	19	90.476190
P867	19	90.476190
P868	19	90.476190
P869	19	90.476190
P880	19	90.476190
P888	19	90.476190
P896	19	90.476190
P898	19	90.476190

P899	19	90.476190
P901	19	90.476190
P847	17	80.952381
P874	2	9.523810
HR104	1	4.761905
HR114	1	4.761905
HR121	1	4.761905
HR132	1	4.761905
HR135	1	4.761905
HR143	1	4.761905
HR155	1	4.761905
HR162	1	4.761905
HR163	1	4.761905
HR171	1	4.761905
HR172	1	4.761905
HR179	1	4.761905
HR183	1	4.761905
HR194	1	4.761905
HR199	1	4.761905
HR201	1	4.761905
HR204	1	4.761905
HR207	1	4.761905
P802	1	4.761905
P803	1	4.761905
P805	1	4.761905
P806	1	4.761905
P826	1	4.761905
P830	1	4.761905
P835	1	4.761905
P839	1	4.761905
P844	1	4.761905
P845	1	4.761905
P853	1	4.761905
P861	1	4.761905
P863	1	4.761905
P865	1	4.761905
P871	1	4.761905
P873	1	4.761905
P875	1	4.761905
P884	1	4.761905
P885	1	4.761905
P887	1	4.761905
P893	1	4.761905

P894	1	4.761905
P897	1	4.761905
P900	1	4.761905
P902	1	4.761905

3.1.3 DAST Scale & Subscale Distributions

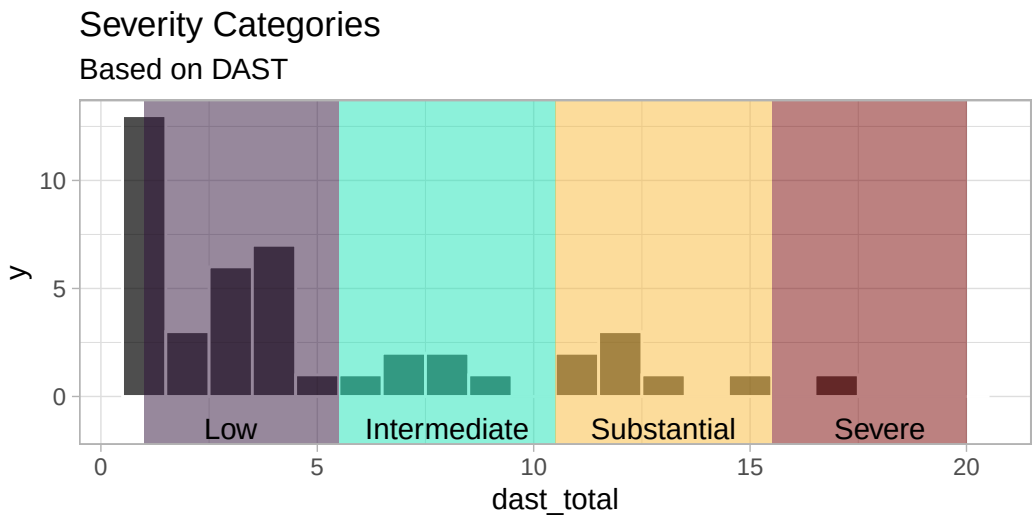
```
complete %>%
  composite_hist(
    x = dast_total
  ) +
  labs(
    title = 'Distribution of Total Scores for DAST Measure'
  )
```



3.1.4 DAST Severity

```
complete %>%
  severity_plot(
  x = dast_total,
  bins = 20,
  low_xmin = 1,
  low_xmax = 5.5,
  medium_xmin = 5.5,
  medium_xmax = 10.5,
  large_xmin = 10.5,
  large_xmax = 15.5,
  critical_xmin = 15.5,
  critical_xmax = 20) +
  annotate(
    geom = 'text',
    color = 'Black',
    x = 3,
    y = -1.5,
    label = 'Low'
  ) +
  annotate(
    geom = 'text',
    color = 'Black',
    x = 8,
    y = -1.5,
    label = 'Intermediate'
  ) +
  annotate(
    geom = 'text',
    color = 'Black',
    x = 13,
    y = -1.5,
    label = 'Substantial'
  ) +
  annotate(
    geom = 'text',
    color = 'Black',
    x = 18,
    y = -1.5,
    label = 'Severe'
```

```
  ) +
  labs(
    title = 'Severity Categories',
    subtitle = 'Based on DAST',
    caption = 'Cutoffs are:\nLow = 1-5,\nIntermediate = 6-10,\nSubstantial = 11-15,\nSever
  )
```



3.1.5 DAST Internal Reliability

```
dast_alpha <-
  complete %>%
  select(
    d1a:d3,
    d6:d5_r
         ) %>%
  psych::alpha(check.keys = TRUE)


dast_alpha_table <-
  tibble(
```

```
  Scale = 'DAST',
  Alpha = round(dast_alpha$total$raw_alpha, 3)
)

dast_alpha_table %>%
  gt::gt() %>%
  gt::tab_header(
    title = 'Alpha Values for DAST Scale'
  )
```

Alpha Values for DAST Scale

Scale	Alpha
DAST	0.893

4 Child Abuse

4.1 BCAP

4.1.1 BCAP Description

- Variables for the BCAP measure
  - q1,q2, q3, q4, q5, q6, q7, q8, q9, q10, q11, q12, q13, q14, q15, q16, q17, q18, q19, q20, q21, q22, q23, q24, q25, q26, q27, q28, q29, q30, q31, q32, q33, q34
  - Variable Scale
    - 1 - "Agree"
    - 0 - "Disagree"
    - -77 - "Decline to respond"
  - Total scores should range from 0 to 24
    - total scale score is the BCAP risk scale with all the items that are not part of the lie and random responding subscales
    - q1, q3, q4, q5, q6, q7, q8, q10, q11, q12, q13, q14, q16, q17, q19, q20, q22, q23, q24, q25, q27, q29, q30, q31, q32, q33
  - Reverse coding
    - Items q1, q2, q23, and q29 should be reverse coded
- Subscales
  - Happiness (reverse coded)

        * q1, q23, q29
    - Feelings of persecution
        * q3, q25, q33
    - Loneliness
        * q5, q12, q22, q31
    - Family conflict
        * q6, q13, q17
    - Rigidity
        * q7, q14, q20, q32
    - Distress
        * q8, q11, q16, q19, q27
    - Poverty
        * q10, q30
- Additional subscales to remove invalid cases
    - Lie
        * q4, q9, q15, q21, q26, q34
    - Random responding
        * q2, q18, q28
- Missing Data Rule:
    - Applied. Calculations were completed only with participants that had less then 20% missing data (this includes -77 responses)
- Reference: Ondersma et al. (2005)

4.1.2 BCAP Missing Data

```
data %>%
  select(
    id,
    q3:q22,
```

```
    q24:q28,
    q30:q29_r
         ) %>%
    pct_miss_fun(
      id = 'id',
      n_items = 34
    ) %>%
  gt::gt() %>%
  gt::tab_header(
    title = 'BCAP Missing Data',
    subtitle = 'By Participant'
  )
```

BCAP Missing Data

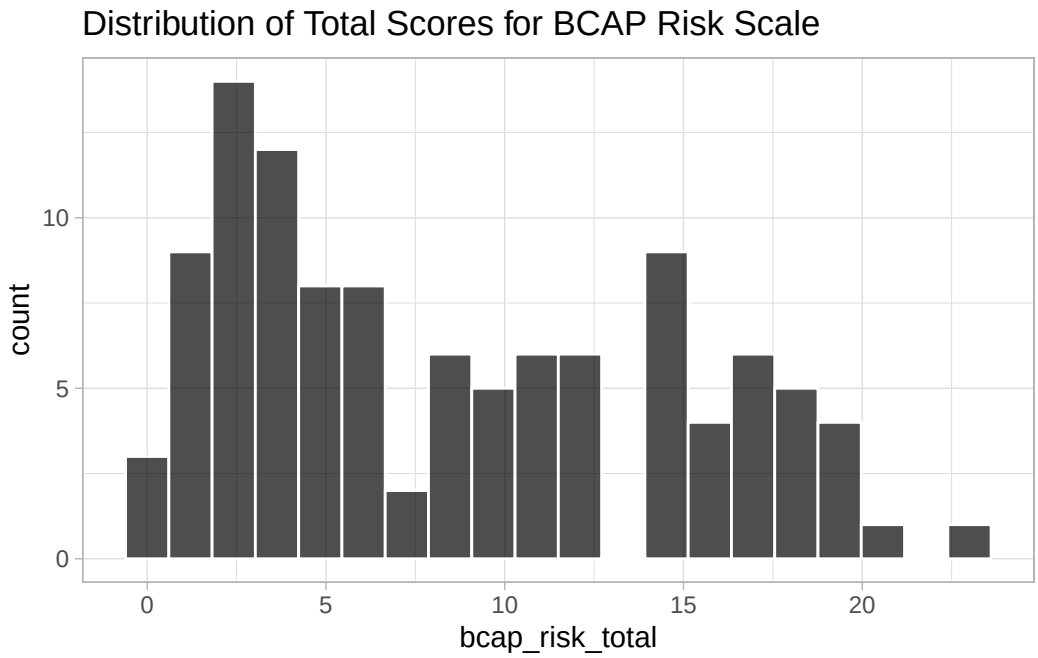
By Participant

id	missing_n	miss_pct
P847	6	17.647059
P896	5	14.705882
HR103	4	11.764706
HR113	4	11.764706
P885	4	11.764706
HR121	3	8.823529
HR204	3	8.823529
HR144	2	5.882353
HR155	2	5.882353
HR156	2	5.882353
P821	2	5.882353
P856	2	5.882353
P865	2	5.882353
HR162	1	2.941176
P815	1	2.941176
P861	1	2.941176
P897	1	2.941176

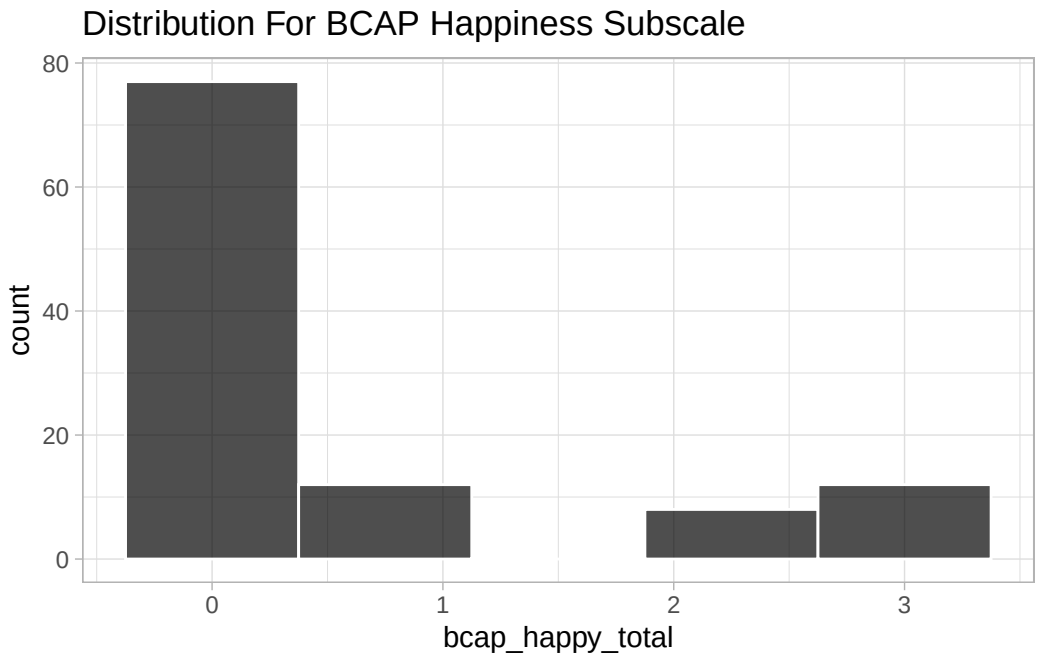
4.1.3 BCAP Scale & Subscale Distributions

```
complete %>%
  composite_hist(
    x = bcap_risk_total
  ) +
```

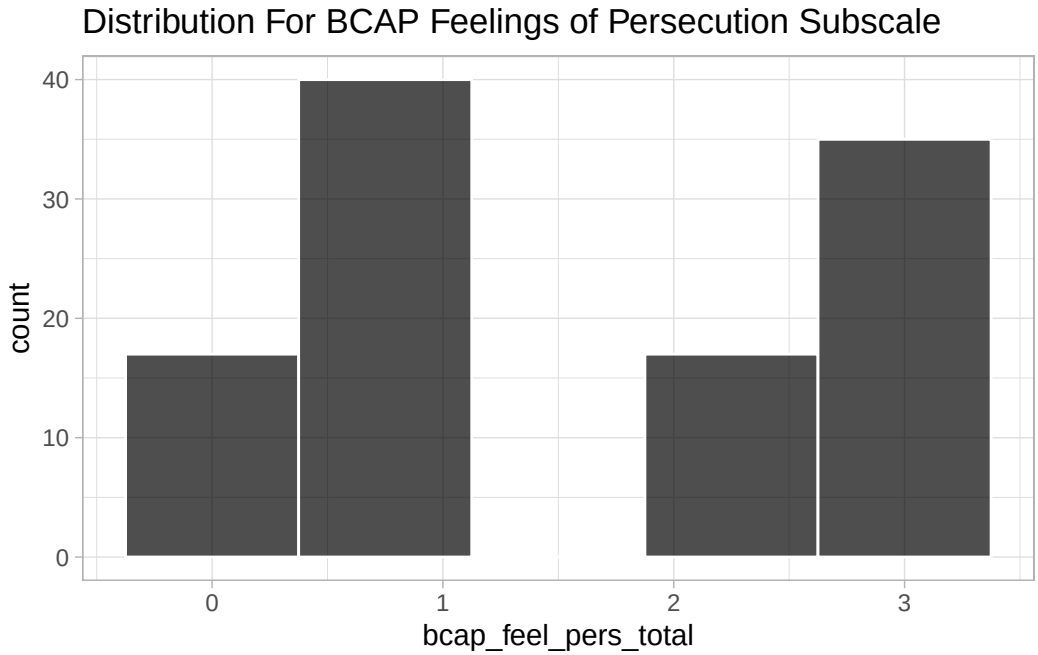
```
  labs(
    title = 'Distribution of Total Scores for BCAP Risk Scale'
  )
```



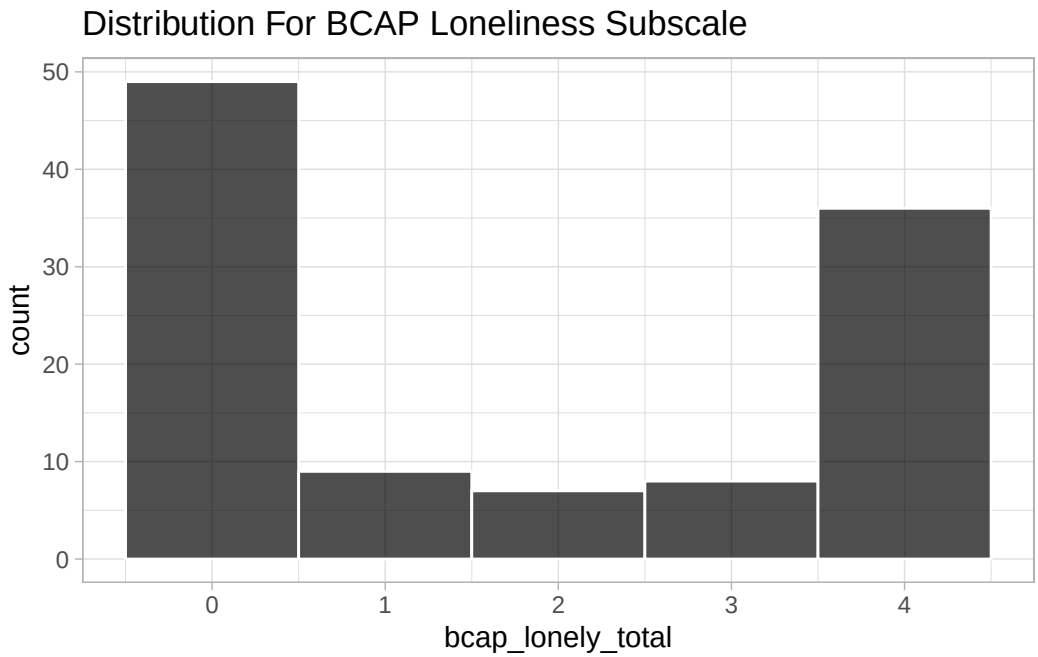

```
complete %>%
  composite_hist(
    x = bcap_happy_total,
    bins = 5
  ) +
  labs(
    title = 'Distribution For BCAP Happiness Subscale'
  )
```



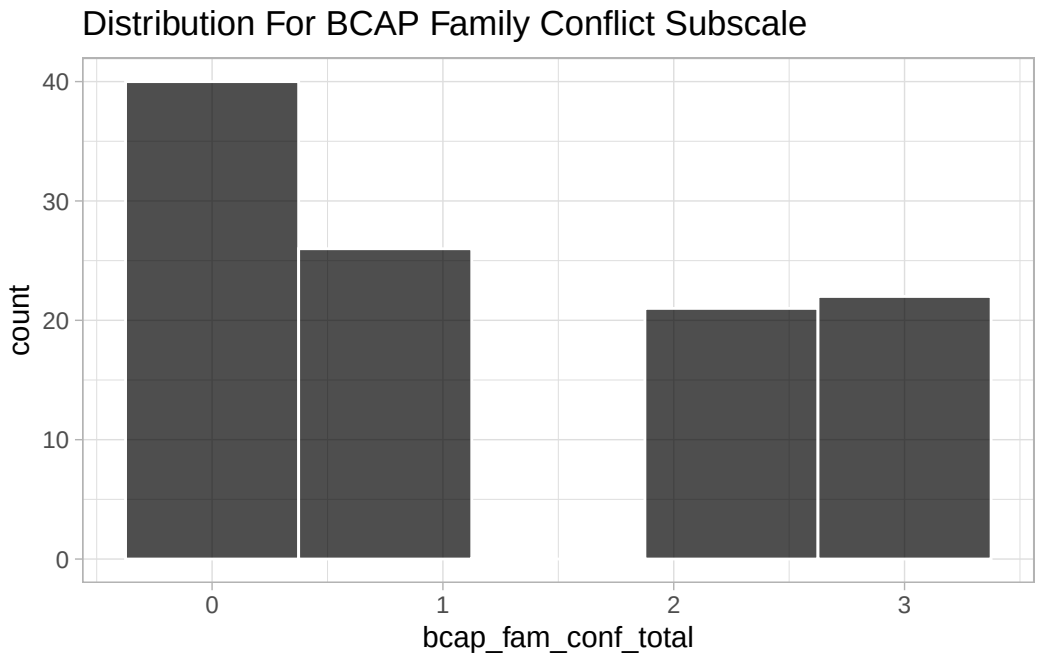

```
complete %>%
  composite_hist(
    x = bcap_feel_pers_total,
    bins = 5
  ) +
  labs(
    title = 'Distribution For BCAP Feelings of Persecution Subscale'
  )
```



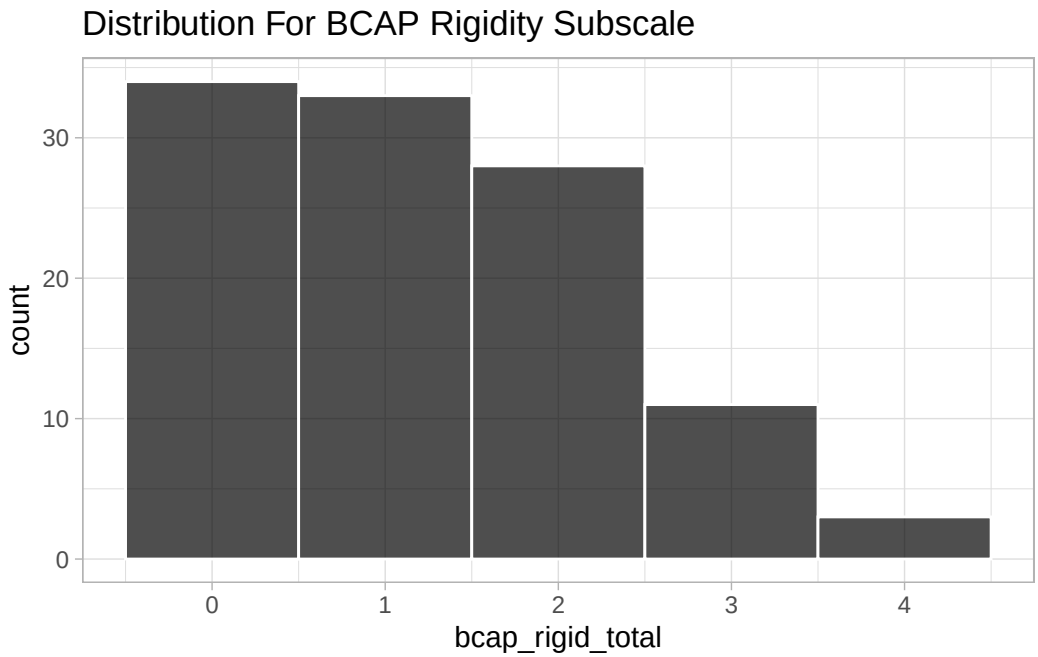

```
complete %>%
  composite_hist(
    x = bcap_lonely_total,
    bins = 5
  ) +
  labs(
    title = 'Distribution For BCAP Loneliness Subscale'
  )
```



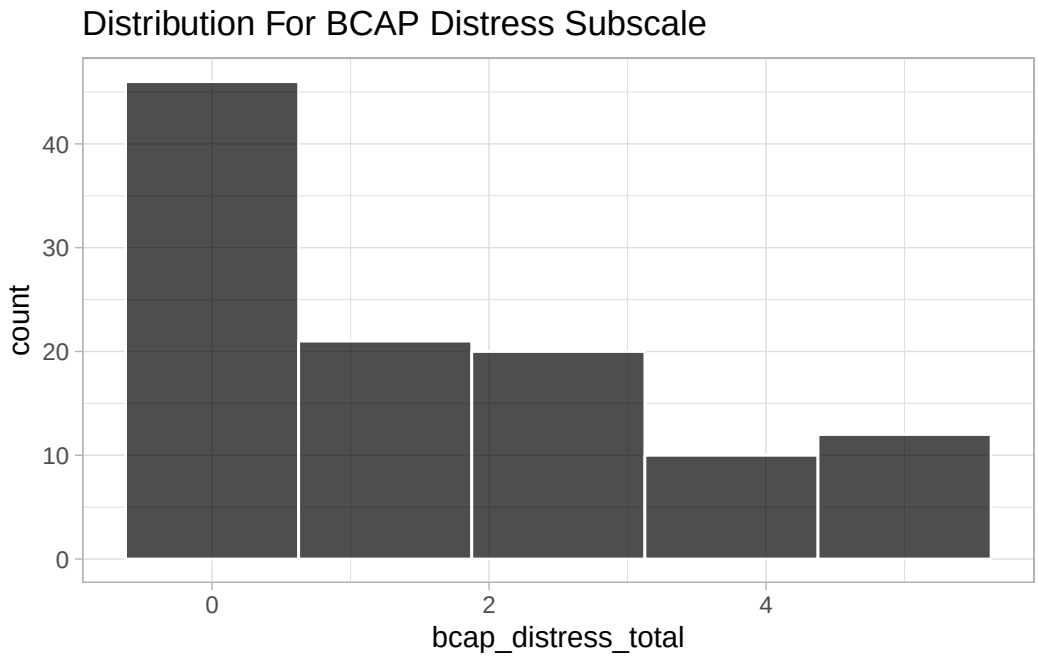

```
complete %>%
  composite_hist(
    x = bcap_fam_conf_total,
    bins = 5
  ) +
  labs(
    title = 'Distribution For BCAP Family Conflict Subscale'
  )
```



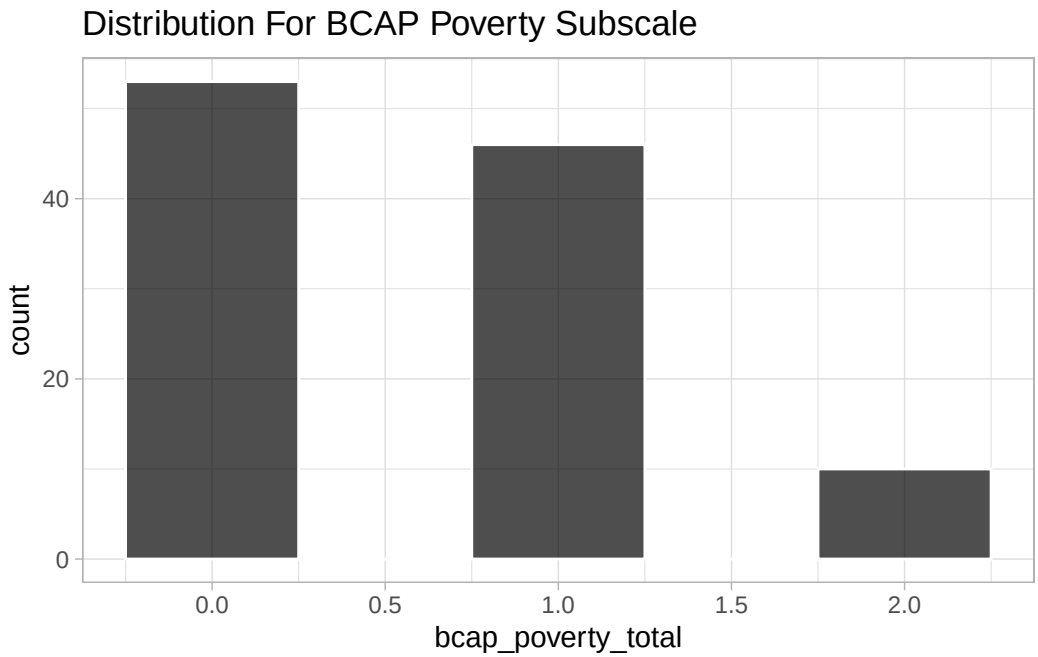

```
complete %>%
  composite_hist(
    x = bcap_rigid_total,
    bins = 5
  ) +
  labs(
    title = 'Distribution For BCAP Rigidity Subscale'
  )
```



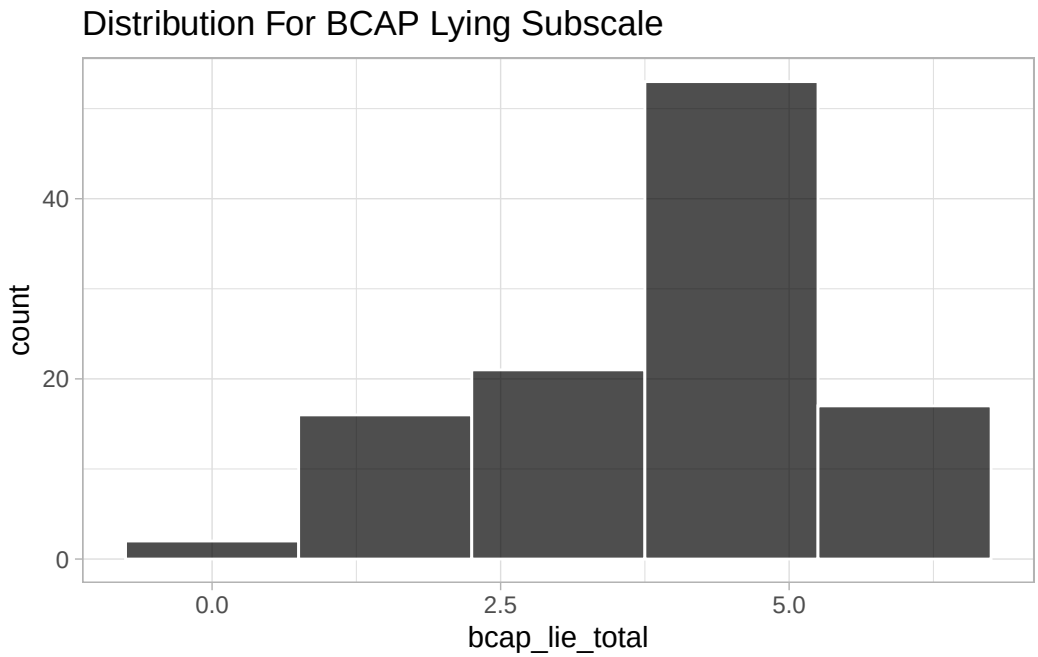

```
complete %>%
  composite_hist(
    x = bcap_distress_total,
    bins = 5
  ) +
  labs(
    title = 'Distribution For BCAP Distress Subscale'
  )
```



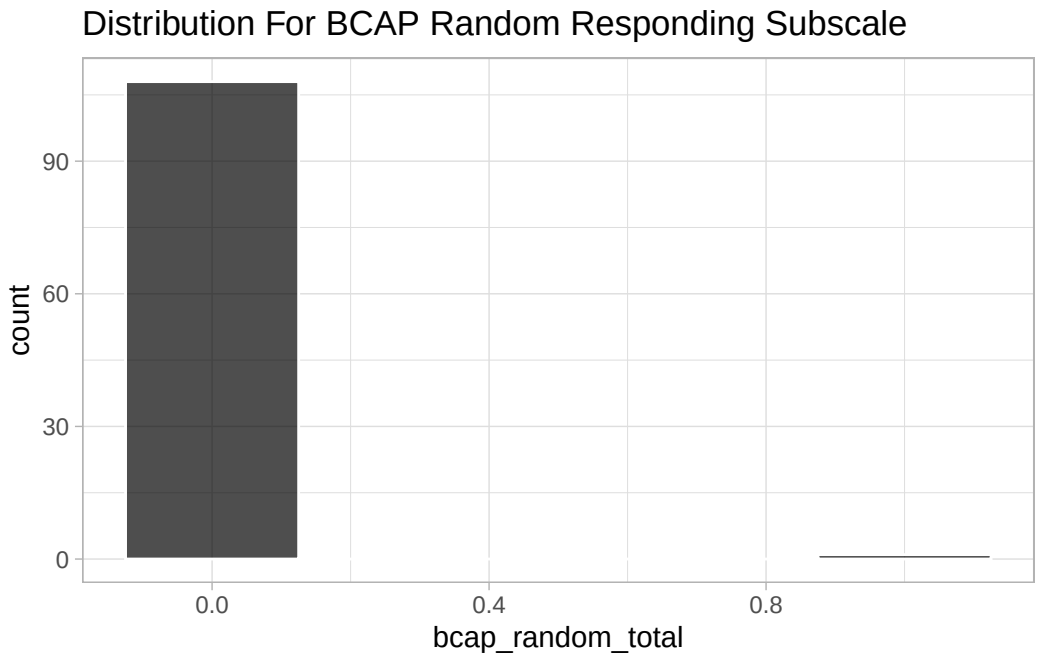

```
complete %>%
  composite_hist(
    x = bcap_poverty_total,
    bins = 5
  ) +
  labs(
    title = 'Distribution For BCAP Poverty Subscale'
  )
```




```
complete %>%
  composite_hist(
    x = bcap_lie_total,
    bins = 5
  ) +
  labs(
    title = 'Distribution For BCAP Lying Subscale'
  )
```

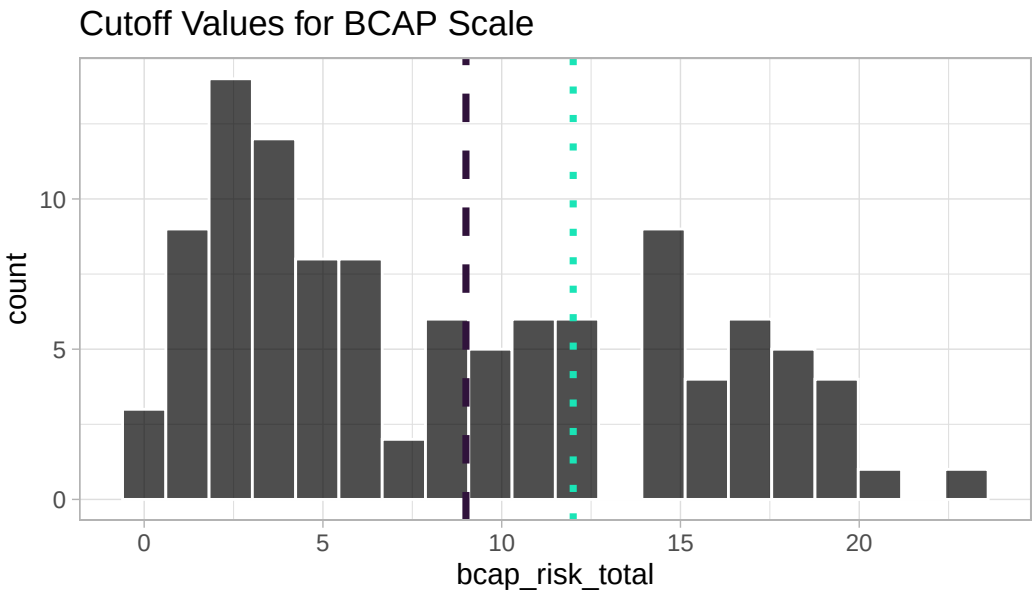



```
complete %>%
  composite_hist(
    x = bcap_random_total,
    bins = 5
  ) +
  labs(
    title = 'Distribution For BCAP Random Responding Subscale'
  )
```



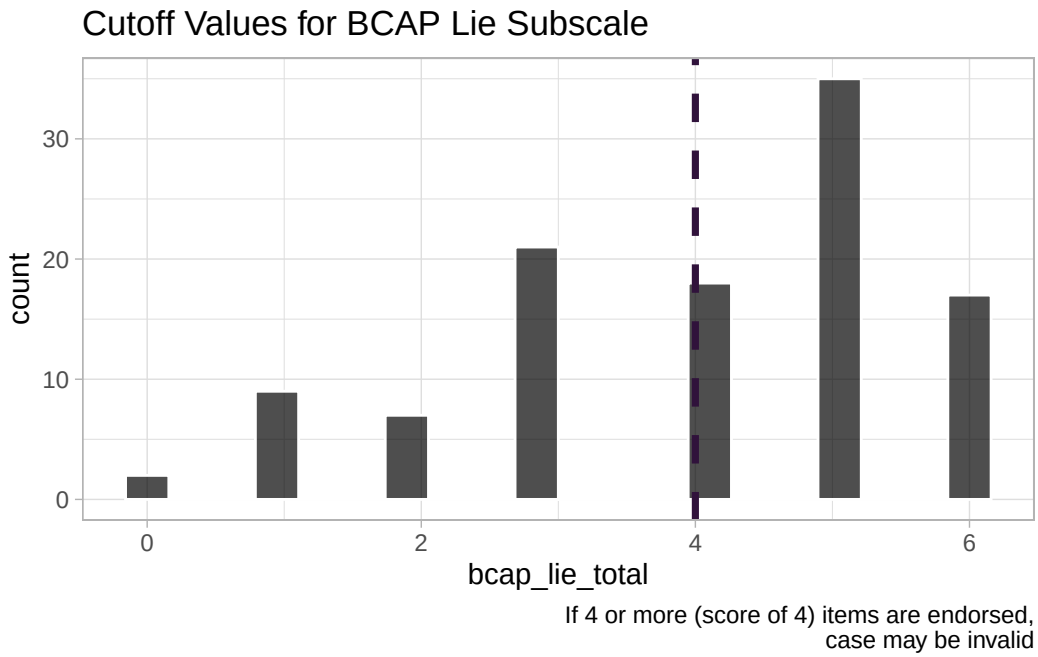
4.1.4 BCAP Cutoffs

```
complete %>%
  cutoff_plot(
    x = bcap_risk_total,
    cutoff = 9,
    cutoff_other = 12
  ) +
  labs(
    title = 'Cutoff Values for BCAP Scale',
    caption = 'Cutoffs are 9 and 12\nSee references for literature on cutoff scores.'
  )
```

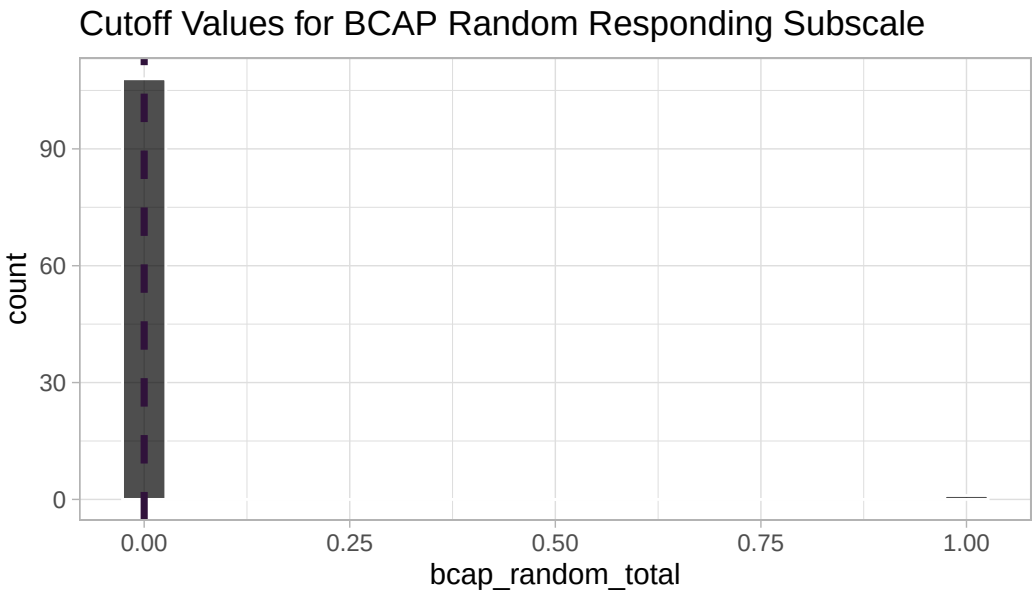


Cutoffs are 9 and 12
See references for literature on cutoff scores.

```
complete %>%
  cutoff_plot(
    x = bcap_lie_total,
    cutoff = 4
  ) +
  labs(
    title = 'Cutoff Values for BCAP Lie Subscale',
    caption = 'If 4 or more (score of 4) items are endorsed,\ncase may be invalid'
  )
```




```
complete %>%
  cutoff_plot(
    x = bcap_random_total,
    cutoff = 0
  ) +
  labs(
    title = 'Cutoff Values for BCAP Random Responding Subscale',
    caption = 'If any of these items are endorsed (score > 0),\ncase may be invalid'
  )
```



4.1.5 BCAP Internal Reliability

```
bcap_alpha <-
  complete %>%
  select(
    q1_r,
    q2_r,
    q3:q22,
    q23_r,
    q24:q28,
    q29_r,
    q30:q34
  ) %>%
  psych::alpha(check.keys = TRUE)

bcap_risk_alpha <-
  complete %>%
  select(
    q1_r,
    q3,
    q5:q8,
```

```
    q10:q14,
    q16:q17,
    q19:q20,
    q22,
    q23_r,
    q24:q25,
    q27,
    q29_r,
    q30:q33
    ) %>%
  psych::alpha(check.keys = TRUE)

bcap_happy_alpha <-
  complete %>%
  select(q1_r, q23_r, q29_r) %>%
  psych::alpha(check.keys = TRUE)

bcap_feel_pers_alpha <-
  complete %>%
  select(q3, q25, q33) %>%
  psych::alpha(check.keys = TRUE)

bcap_lonely_alpha <-
  complete %>%
  select(q5, q12, q22, q31) %>%
  psych::alpha(check.keys = TRUE)

bcap_fam_conf_alpha <-
  complete %>%
  select(q6, q13, q17) %>%
  psych::alpha(check.keys = TRUE)

bcap_rigid_alpha <-
  complete %>%
  select(q7, q14, q20, q32) %>%
  psych::alpha(check.keys = TRUE)

bcap_distress_alpha <-
  complete %>%
  select(q8, q11, q16, q19, q27) %>%
  psych::alpha(check.keys = TRUE)
```

```r
bcap_poverty_alpha <-
  complete %>%
  select(q10, q30) %>%
  psych::alpha(check.keys = TRUE)

bcap_lie_alpha <-
  complete %>%
  select(q4, q9, q15, q21, q26, q34) %>%
  psych::alpha(check.keys = TRUE)

bcap_random_alpha <-
  complete %>%
  select(q2_r, q19, q28) %>%
  psych::alpha(check.keys = TRUE)

bcap_alpha_table <-
  tibble(
    Scale = c('BCAP Complete Scale', 'BCAP Risk Scale',
              'Happiness Subscale', 'Feelings of Persecution Subscale',
              'Loneliness Subscale', 'Family Conflict Subscale',
              'Rigidity Subscale', 'Distress Subscale',
              'Poverty Subscale',
              'Lying Subscale', 'Random Responding Subscale'),
    Alpha = c(round(bcap_alpha$total$raw_alpha, 3),
              round(bcap_risk_alpha$total$raw_alpha, 3),
              round(bcap_happy_alpha$total$raw_alpha, 3),
              round(bcap_feel_pers_alpha$total$raw_alpha, 3),
              round(bcap_lonely_alpha$total$raw_alpha, 3),
              round(bcap_fam_conf_alpha$total$raw_alpha, 3),
              round(bcap_rigid_alpha$total$raw_alpha, 3),
              round(bcap_distress_alpha$total$raw_alpha, 3),
              round(bcap_poverty_alpha$total$raw_alpha, 3),
              round(bcap_lie_alpha$total$raw_alpha, 3),
              round(bcap_random_alpha$total$raw_alpha, 3))
  )

bcap_alpha_table %>%
  gt::gt() %>%
  gt::tab_header(
    title = 'Alpha Values for BCAP Scale & Subscales'
  )
```

Alpha Values for BCAP Scale & Subscales

Scale	Alpha
BCAP Complete Scale	0.908
BCAP Risk Scale	0.909
Happiness Subscale	0.830
Feelings of Persecution Subscale	0.714
Loneliness Subscale	0.926
Family Conflict Subscale	0.718
Rigidity Subscale	0.502
Distress Subscale	0.833
Poverty Subscale	0.228
Lying Subscale	0.612
Random Responding Subscale	0.126

5 Partner Relationships

5.1 DYADC

5.1.1 DYADC Description

- Variables for DYADC scale
  - `e1`, `e2`, `e3`, `e4`, `e5`, `e6`, `e7`, `e8`, `e9`, `e10`, `e11`, `e12`, `e13`, `e14`, `e15`, `e16`, `e17`, `e18`, `e19`, `e20`, `e21`, `e22`, `e23`, `e24`, `e25`, `e26`, `e27`, `e28`, `e29`, `e30`, `e31`, `e32`
- Variable Scale
  - For items `e1` to `e15`
    - 5 - “Always Agree”
    - 4 - “Almost Always Agree”
    - 3 - “Occasionally Disagree”
    - 2 - “Frequently Disagree”
    - 1 - “Almost Always Disagree”
    - 0 - “Always Disagree”
    - -77 - “Declined to Respond”
  - Items `e16` to `e22`, except `e18` and `e19` are reverse scored

    - 0 - “All the time”
    - 1 - “Most of the time”
    - 2 - “More often than not”
    - 3 - “Occasionally”
    - 4 - “Rarely”
    - 5 - “Never”
    - -77 -“Declined to Respond”
- Items `e23` and `e24` are both on the following scale
    - 4 - “Every day”
    - 3 - “Almost every day”
    - 2 - “Occasionally”
    - 1 - “Rarely”
    - 0 - “Never”
    - -77 - “Declined to Respond”
- Items `e25` to `e28`
    - 0 - “Never”
    - 1 - “Less than once a month”
    - 2 - “Once or twice a month”
    - 3 - “Once or twice a week”
    - 4 - “Once a day”
    - 5 - “More often”
    - -77 - “Declined to Respond”
- Items `e29` and `e30`
    - 0 - “Yes”
    - 1 - “No”
- `e31`
    - 0 - “Extremely Unhappy”
    - 1 - “Fairly Unhappy”

        * 2 - “A Little Unhappy”
        * 3 - “Happy”
        * 4 - “Very Happy”
        * 5 - “Extremely Happy”
        * 6 - “Perfect”
        * -77 - “Declined to Respond”
    - `e32`
        * 5 - “I want desperately for my relationship to succeed, and would go to almost any length to see that it does.”
        * 4 - “I want very much for my relationship to succeed, and will do all I can to see that it does.”
        * 3 - “I want very much for my relationship to succeed, and will do my fair share to see that it does.”
        * 2 - “It would be nice if my relationship succeeded, but I can’t do much more than I’m doing now to help it succeed.”
        * 1 - “It would be nice if it succeeded, but I refuse to do any more than I am doing now to keep the relationship going.”
        * 0 - “My relationship can never succeed, and there is no more that I can do to keep the relationship going.”
        * -77 - “Declined to Respond”
- Total scores should range from 0 to 151
- Reverse Coding
    - `e18` and `e19` are reverse coded
- Subscales
    - Dyadic Consensus
        * `e1`, `e2`, `e3`, `e4`, `e5`, `e6`, `e7`, `e8`, `e9`, `e10`, `e11`, `e12`, `e13`
    - Affective Expression
        * `e4`, `e6`, `e29`, `e30`
    - Dyadic Satisfaction
        * `e16`, `e17`, `e18`, `e19`, `e20`, `e21`, `e22`, `e23`, `e31`, `e32`

  - Dyadic Cohesion
    - e24, e25, e26, e27, e28

- Missing Data Rule:
  - Applied. Calculations were completed only with participants that had less then 20% missing data (this includes -77 responses)

- Reference: Spanier (1976)

5.1.2 DYADC Missing Data

```
data %>%
  select(
    id,
    e1:e32
  ) %>%
  pct_miss_fun(
    id = 'id',
    n_items = 32
  ) %>%
  gt::gt() %>%
  gt::tab_header(
    title = 'DYADC Missing Data',
    subtitle = 'By Participant'
  )
```

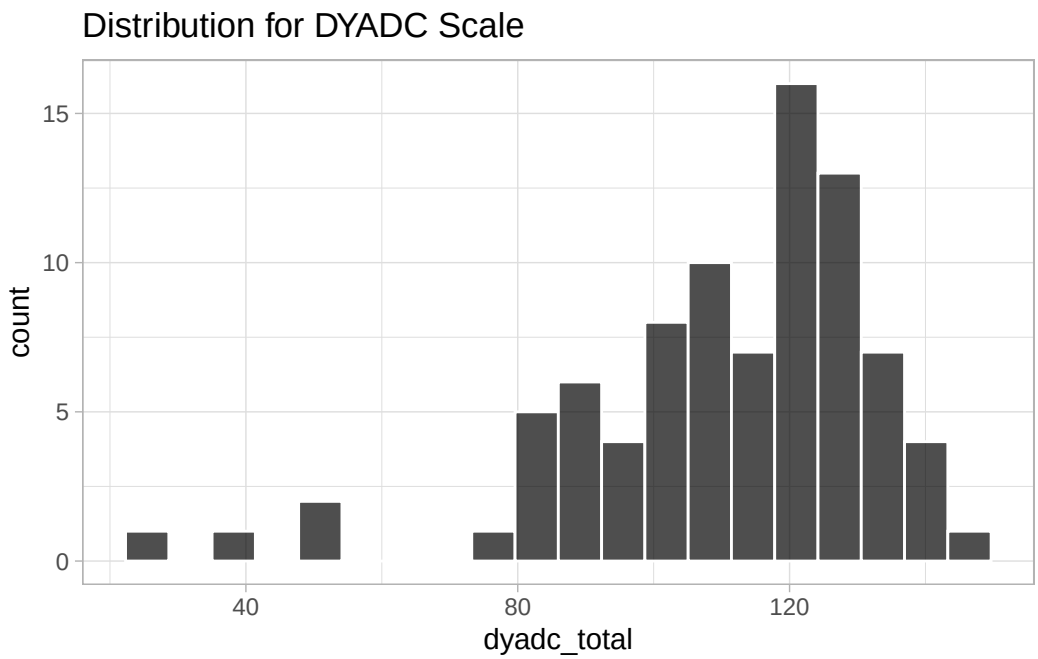
DYADC Missing Data
By Participant

id	missing_n	miss_pct
HR121	32	100.000
HR132	32	100.000
HR139	32	100.000
HR140	32	100.000
HR141	32	100.000
HR144	32	100.000
HR150	32	100.000
HR153	32	100.000
HR175	32	100.000
HR183	32	100.000
HR199	32	100.000

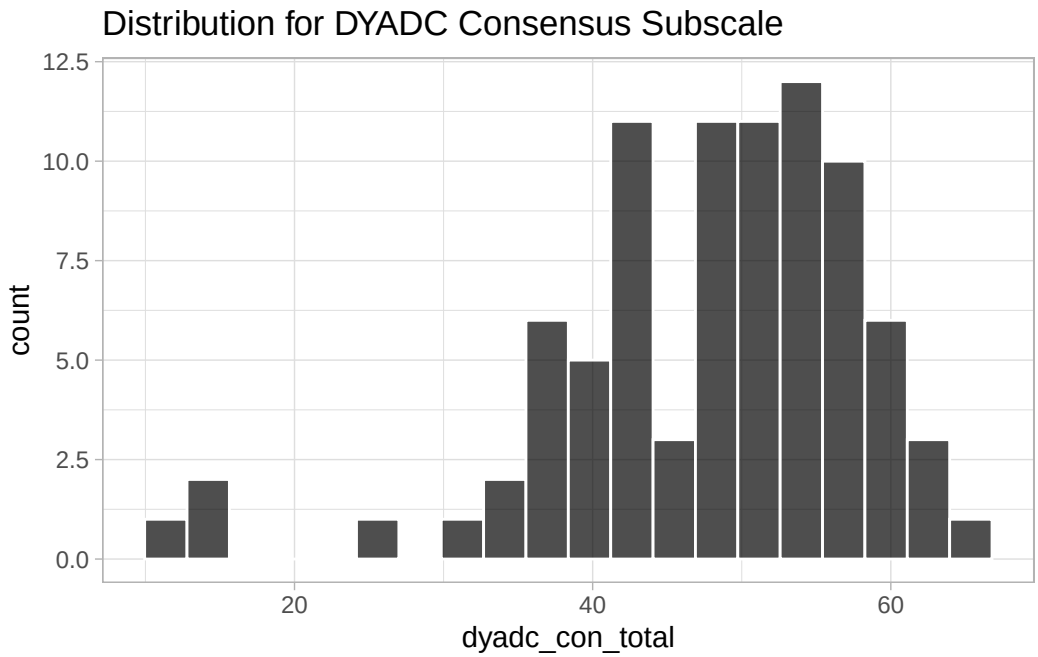
HR201	32	100.000
HR204	32	100.000
HR212	32	100.000
HR214	32	100.000
P830	32	100.000
P845	32	100.000
P869	32	100.000
P874	32	100.000
P885	32	100.000
P896	32	100.000
P813	12	37.500
P847	9	28.125
P854	8	25.000
P861	5	15.625
P815	4	12.500
HR194	3	9.375
HR155	2	6.250
P821	2	6.250
HR156	1	3.125
HR162	1	3.125
P860	1	3.125

5.1.3 DYADC Scale & Subscale Distributions

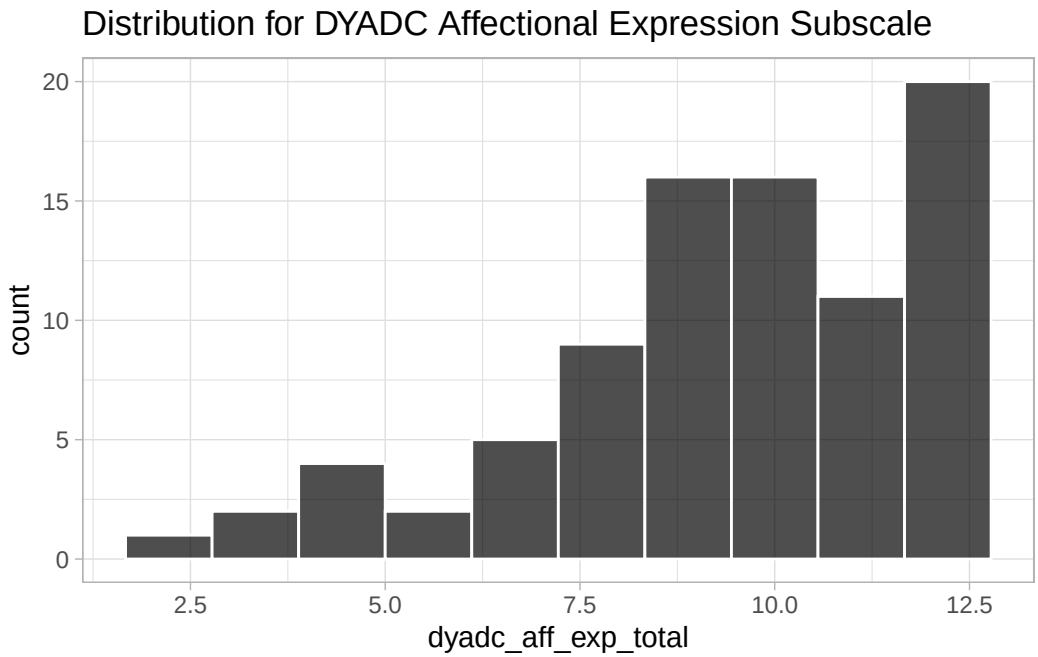
```
complete %>%
  composite_hist(
    x = dyadc_total
  ) +
  labs(
    title = 'Distribution for DYADC Scale'
  )
```



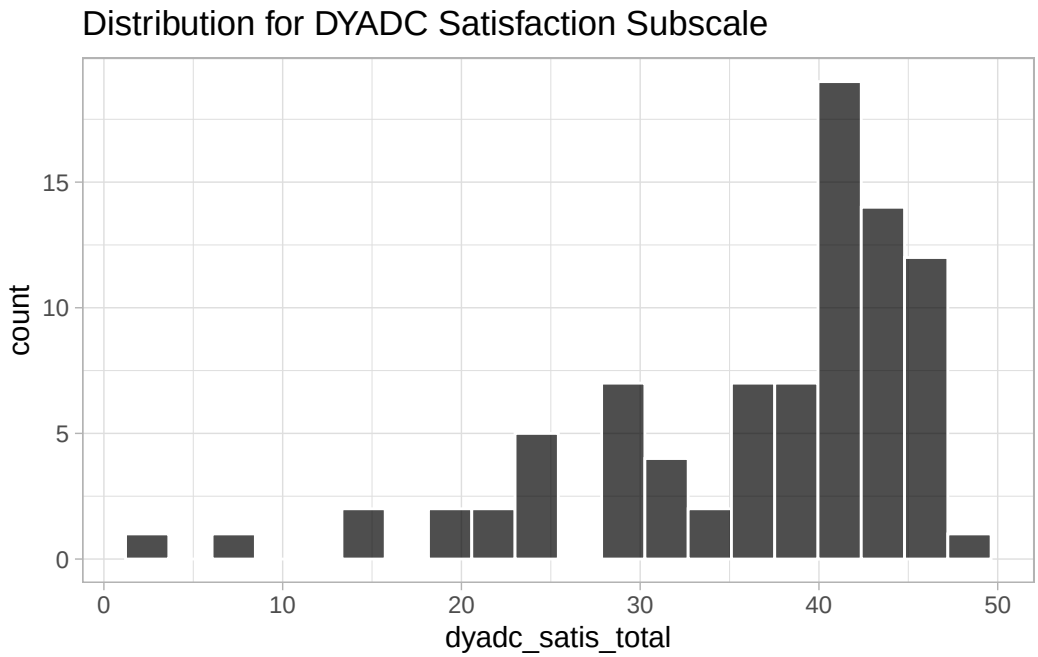

```
complete %>%
  composite_hist(
    x = dyadc_con_total
  ) +
  labs(
    title = 'Distribution for DYADC Consensus Subscale'
  )
```



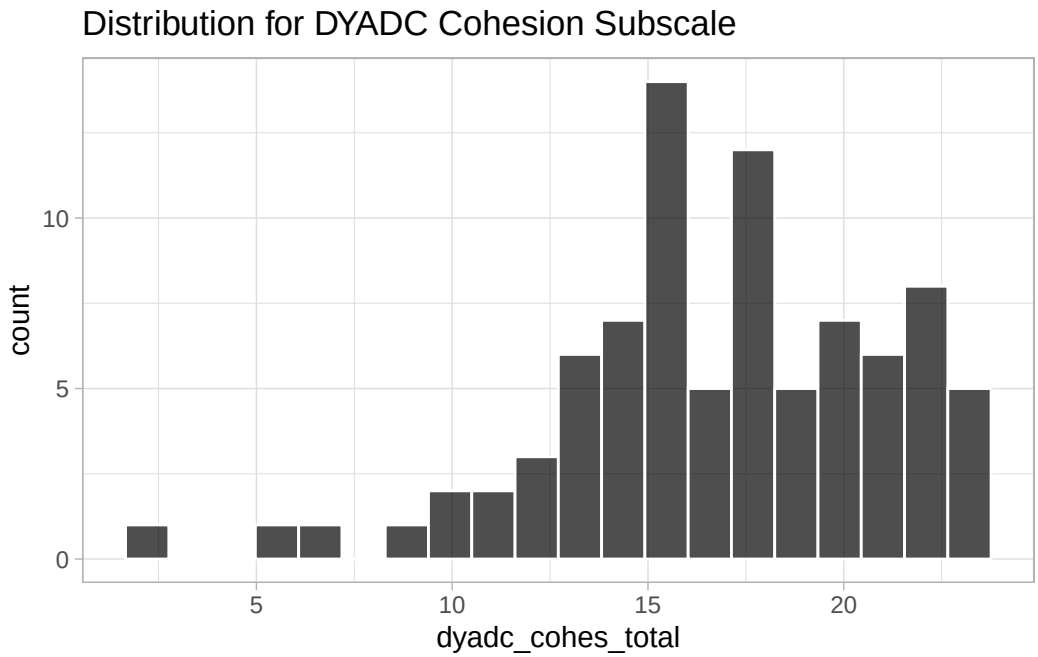

```
complete %>%
  composite_hist(
    x = dyadc_aff_exp_total,
    bins = 10
  ) +
  labs(
    title = 'Distribution for DYADC Affectional Expression Subscale'
  )
```




```
complete %>%
  composite_hist(
    x = dyadc_satis_total
  ) +
  labs(
    title = 'Distribution for DYADC Satisfaction Subscale'
  )
```

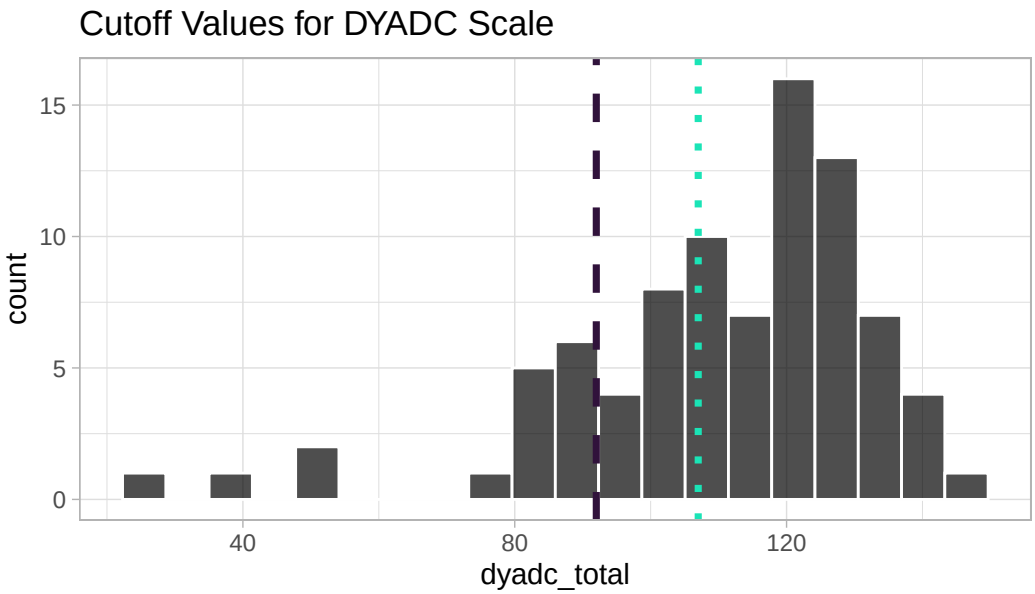



```
complete %>%
  composite_hist(
    x = dyadc_cohes_total
  ) +
  labs(
    title = 'Distribution for DYADC Cohesion Subscale'
  )
```



5.1.4 DYADC Cutoffs

```
complete %>%
  cutoff_plot(
    x = dyadc_total,
    cutoff = 92,
    cutoff_other = 107
  ) +
  labs(
    title = 'Cutoff Values for DYADC Scale',
    caption = 'Cutoffs are 92 and 107\nSee references for literature on cutoff scores.'
  )
```



Cutoffs are 92 and 107
See references for literature on cutoff scores.

5.1.5 DYADC Internal Reliability

```
dyadc_alpha <-
  complete %>%
  select(
    e1:e32
  ) %>%
  psych::alpha(check.keys = TRUE)

dyadc_con_alpha <-
  complete %>%
  select(
    e1:e13
  ) %>%
  psych::alpha(check.keys = TRUE)

dyadc_aff_exp_alpha <-
  complete %>%
  select(
    e4, e6, e29, e30
  ) %>%
```

```r
  psych::alpha(check.keys = TRUE)

dyadc_satis_alpha <-
  complete %>%
  select(
    e16:e23,
    e31,
    e32
  ) %>%
  psych::alpha(check.keys = TRUE)

dyadc_cohes_alpha <-
  complete %>%
  select(
    e24:e28
  ) %>%
  psych::alpha(check.keys = TRUE)

dyadc_alpha_table <-
  tibble(
    Scale = c('DYADC',
              'DYADC - Consensus',
              'DYADC - Affectional Expression',
              'DYADC - Satisfaction',
              'DYADC - Cohesion'

    ),
    Alpha = c(round(dyadc_alpha$total$raw_alpha, 3),
              round(dyadc_con_alpha$total$raw_alpha, 3),
              round(dyadc_aff_exp_alpha$total$raw_alpha, 3),
              round(dyadc_satis_alpha$total$raw_alpha, 3),
              round(dyadc_cohes_alpha$total$raw_alpha, 3))
  )

dyadc_alpha_table %>%
  gt::gt() %>%
  gt::tab_header(
    title = 'Alpha Values for DYADC Scale & Subscales'
  )
```

Alpha Values for DYADC Scale & Subscales

Scale	Alpha
DYADC	0.941
DYADC - Consensus	0.887
DYADC - Affectional Expression	0.640
DYADC - Satisfaction	0.916
DYADC - Cohesion	0.792

5.2 CTS2S

5.2.1 CTS2S Description

- Variables in CTS2S
  - `ct1`, `ct2`, `ct3`, `ct4`, `ct5`, `ct6`, `ct7`, `ct8`, `ct9`, `ct10`, `ct11`, `ct12`, `ct13`, `ct14`, `ct15`, `ct16`, `ct17`, `ct18`, `ct19`, `ct20`
- Variable Scale
  - 1 - "Once in the past year"
  - 2 - "Twice in the past year"
  - 3 - "3-5 times in the past year"
  - 4 - "6-10 times in the past year"
  - 5 - "11-20 times in the past year"
  - 6 - "More than 20 times in the past year"
  - 7 - "Not in the past year, but it did happen before"
  - 8 - "This has never happened"
  - -77 - "Declined to Respond"
- Subscales (Individual/Participant/TC)
  - Psychological Aggression
    - `ct3`, `ct13`
  - Physical Injury
    - `ct5`, `ct15`
  - Assault
    - `ct9`, `ct11`

  - Sexual Cohesion
    * `ct17`, `ct19`
  - Negotiation
    * `ct1`, `ct7`
- Subscales (Partner)
  - Psychological Aggression
    * `ct4`, `ct14`
  - Physical Injury
    * `ct6`, `ct16`
  - Assault
    * `ct10`, `ct12`
  - Sexual Cohesion
    * `ct18`, `ct20`
  - Negotiation
    * `ct2`, `ct8`
- CTS2S should not have a calculated total/average composite score
- CTS2S has three different ways of scoring (Prevalence, Severity, Mutuality)
  - Prevalence
    * assessed for both individual/participant/TC and partner
    * assessed by whether any behavior within each subscale occurred in the past year
  - Severity
    * assessed for both individual/participant/TC and partner
    * assessed as either no instance of the behavior, minor instance of the behavior, or severe instance of the behavior for each subscale
    * 0 - "No"
    * 1 - "Minor"
    * 2 - "Severe"

  - Mutuality
    * assessed by combining responses from both individual/participant/TC and partner
    * assessed as either none, male/partner only, female/individual/participant/TC only, both
    * 0 - "None"
    * 1 - "Partner only"
    * 2 - "Individual/Participant/TC only"
    * 3 - "Both"

- Missing Data Rule:
  - Applied. Calculations were completed only with participants that had less then 20% missing data (this includes `-77` responses)

- Reference: Straus and Douglas (2004)

5.2.2 CTS2S Missing Data

```
data %>%
  select(
    id,
    ct1:ct20
  ) %>%
  pct_miss_fun(
    id = 'id',
    n_items = 20
  ) %>%
  gt::gt() %>%
  gt::tab_header(
    title = 'CTS2S Missing Data',
    subtitle = 'By Participant'
  )
```

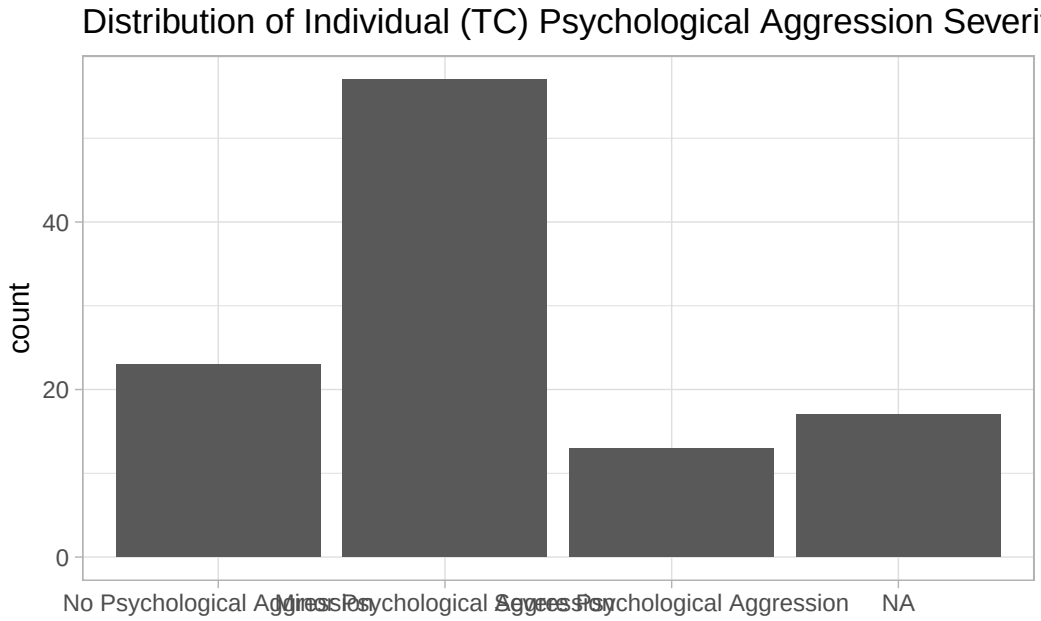
CTS2S Missing Data
By Participant

id	missing_n	miss_pct
HR132	20	100

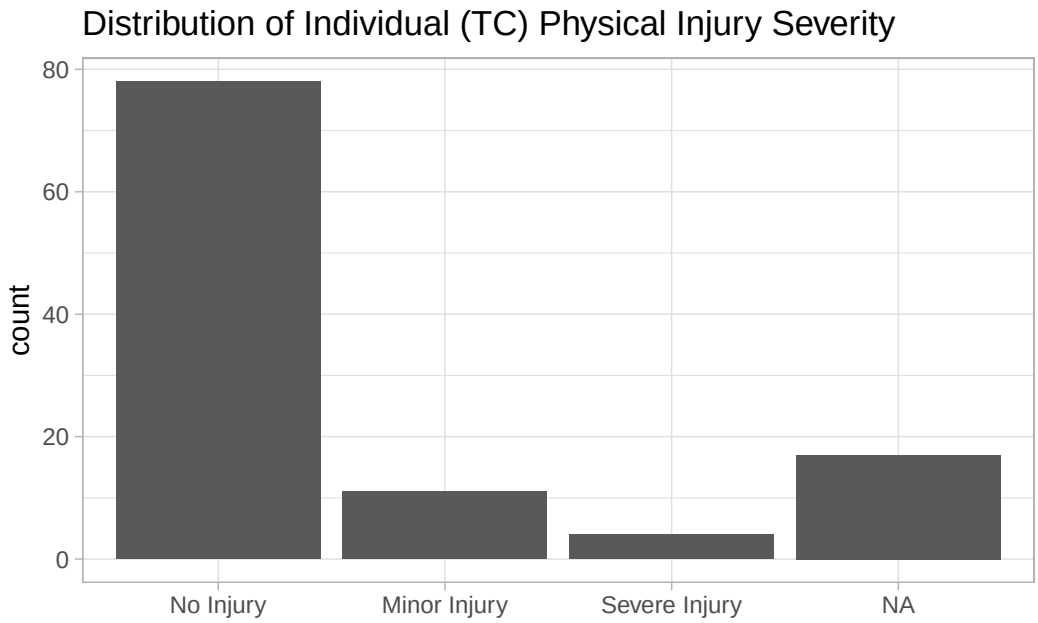
HR139	20	100
HR140	20	100
HR144	20	100
HR150	20	100
HR153	20	100
HR175	20	100
HR183	20	100
HR199	20	100
HR201	20	100
HR204	20	100
HR212	20	100
P830	20	100
P845	20	100
P869	20	100
P874	20	100
P896	20	100
HR162	2	10
P847	1	5

5.2.3 CTS2S Severity Distributions (Individual [TC])

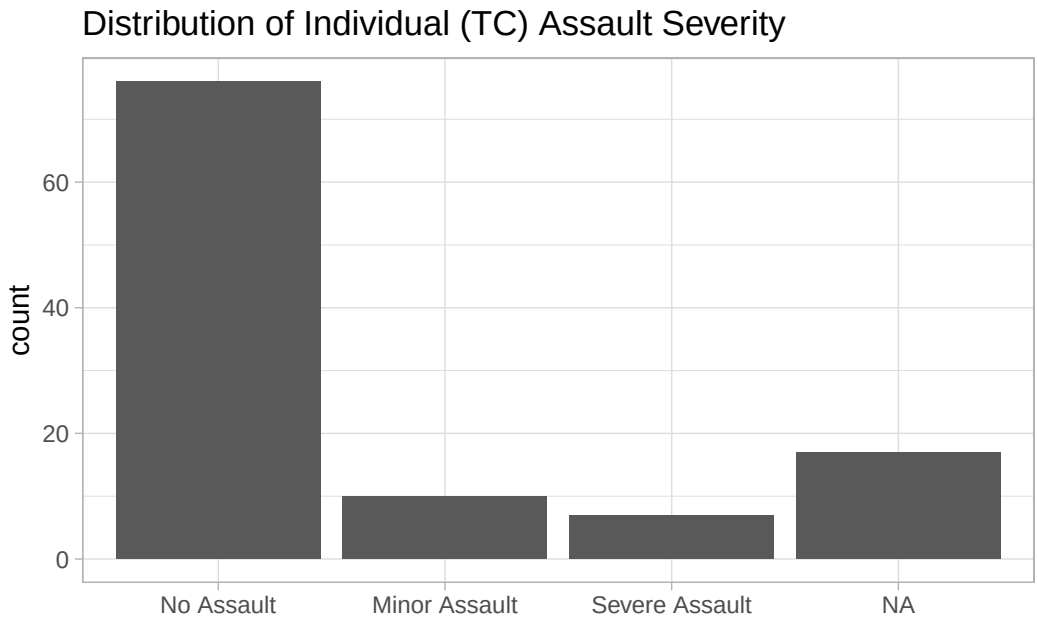
```
complete %>%
  mutate(
    cts_psy_agg_ind_sev = case_when(
      cts_psy_agg_ind_sev == 0 ~ 'No Psychological Aggression',
      cts_psy_agg_ind_sev == 1 ~ 'Minor Psychological Aggression',
      cts_psy_agg_ind_sev == 2 ~ 'Severe Psychological Aggression'
    ),
    cts_psy_agg_ind_sev = as.factor(cts_psy_agg_ind_sev),
    cts_psy_agg_ind_sev = relevel(cts_psy_agg_ind_sev, 'No Psychological Aggression')
  ) %>%
  ggplot(
    aes(
      cts_psy_agg_ind_sev
    )
  ) +
  geom_bar() +
  labs(title = 'Distribution of Individual (TC) Psychological Aggression Severity',
       x = '')
```



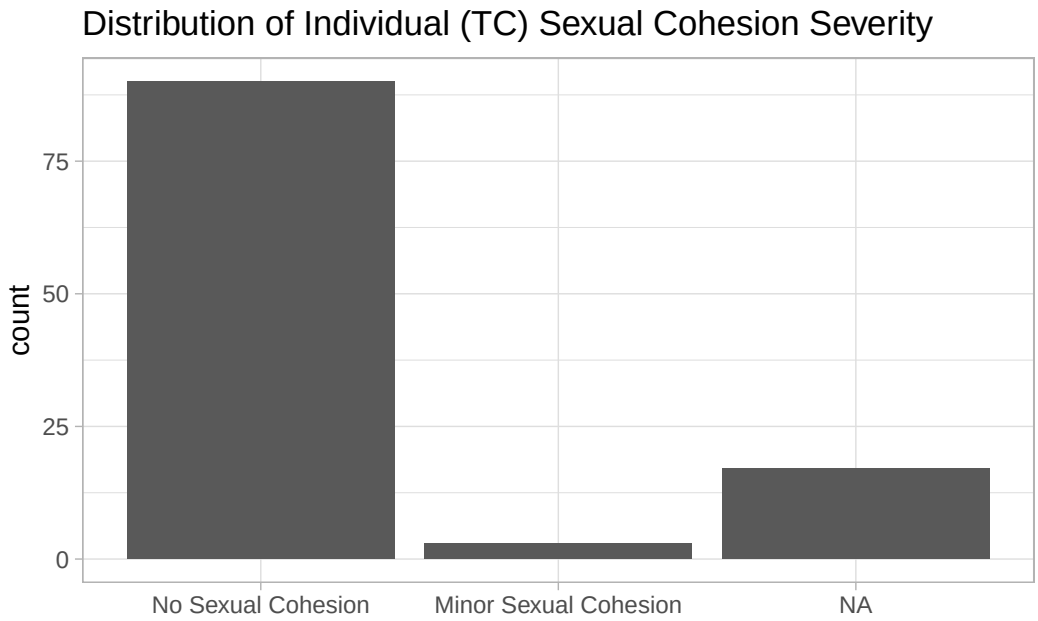

```
complete %>%
  mutate(
    cts_injury_ind_sev = case_when(
      cts_injury_ind_sev == 0 ~ 'No Injury',
      cts_injury_ind_sev == 1 ~ 'Minor Injury',
      cts_injury_ind_sev == 2 ~ 'Severe Injury'
    ),
    cts_injury_ind_sev = as.factor(cts_injury_ind_sev),
    cts_injury_ind_sev = relevel(cts_injury_ind_sev, 'No Injury')
  ) %>%
  ggplot(
    aes(
      cts_injury_ind_sev
    )
  ) +
  geom_bar() +
  labs(title = 'Distribution of Individual (TC) Physical Injury Severity',
       x = '')
```




```
complete %>%
  mutate(
    cts_assault_ind_sev = case_when(
      cts_assault_ind_sev == 0 ~ 'No Assault',
      cts_assault_ind_sev == 1 ~ 'Minor Assault',
      cts_assault_ind_sev == 2 ~ 'Severe Assault'
    ),
    cts_assault_ind_sev = as.factor(cts_assault_ind_sev),
    cts_assault_ind_sev = relevel(cts_assault_ind_sev, 'No Assault')
  ) %>%
  ggplot(
    aes(
      cts_assault_ind_sev
    )
  ) +
  geom_bar() +
  labs(title = 'Distribution of Individual (TC) Assault Severity',
       x = '')
```

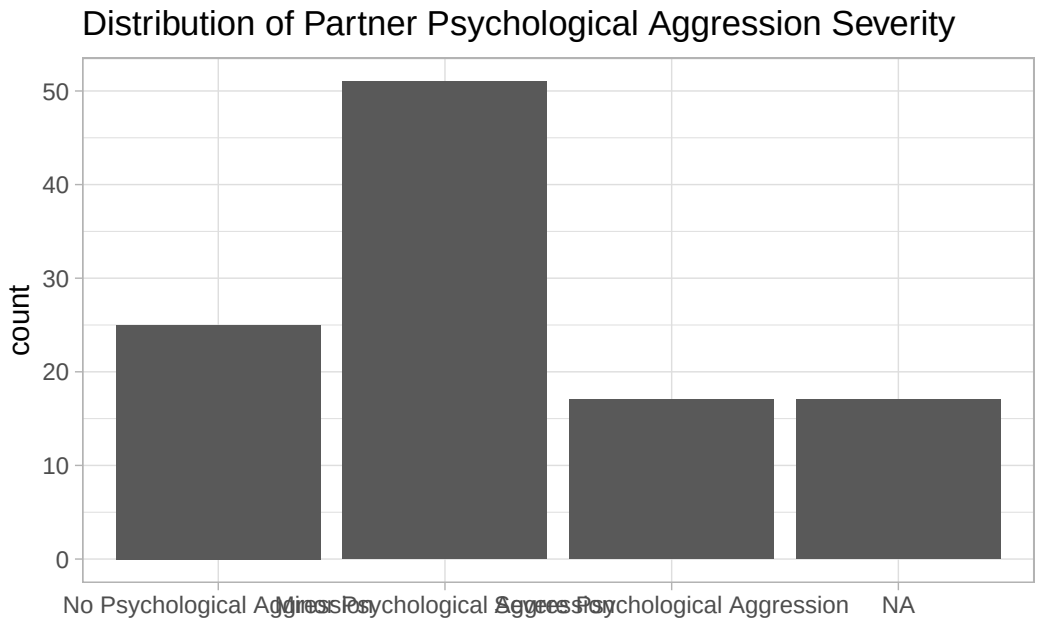



```
complete %>%
  mutate(
    cts_sex_ind_sev = case_when(
      cts_sex_ind_sev == 0 ~ 'No Sexual Cohesion',
      cts_sex_ind_sev == 1 ~ 'Minor Sexual Cohesion',
      cts_sex_ind_sev == 2 ~ 'Severe Sexual Cohesion'
    ),
    cts_sex_ind_sev = as.factor(cts_sex_ind_sev),
    cts_sex_ind_sev = relevel(cts_sex_ind_sev, 'No Sexual Cohesion')
  ) %>%
  ggplot(
    aes(
      cts_sex_ind_sev
    )
  ) +
  geom_bar() +
  labs(title = 'Distribution of Individual (TC) Sexual Cohesion Severity',
       x = '')
```

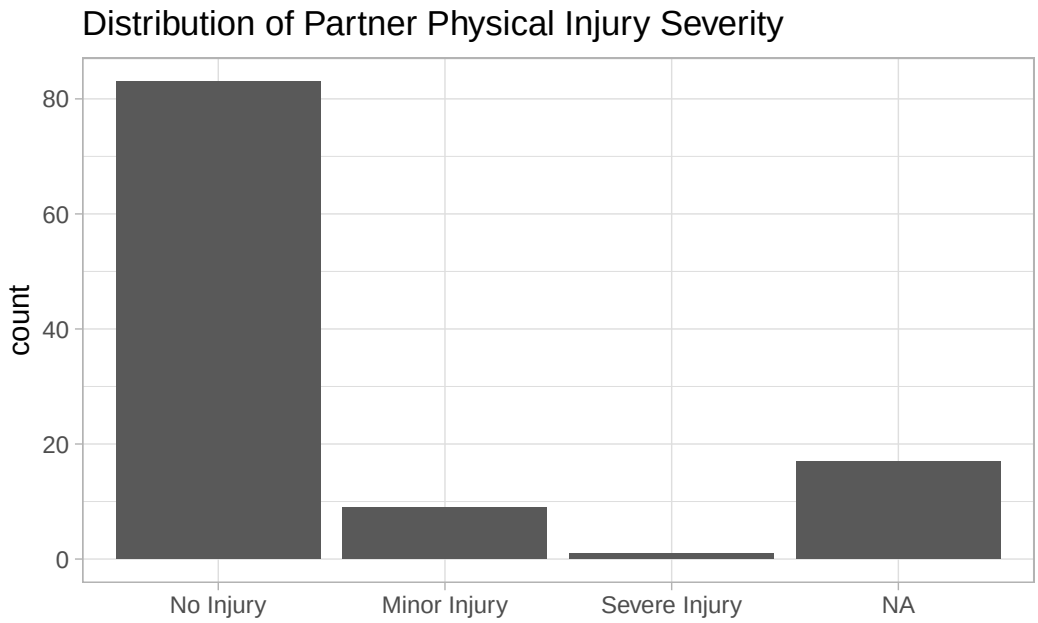


5.2.4 CTS2S Severity Distributions (Partner)

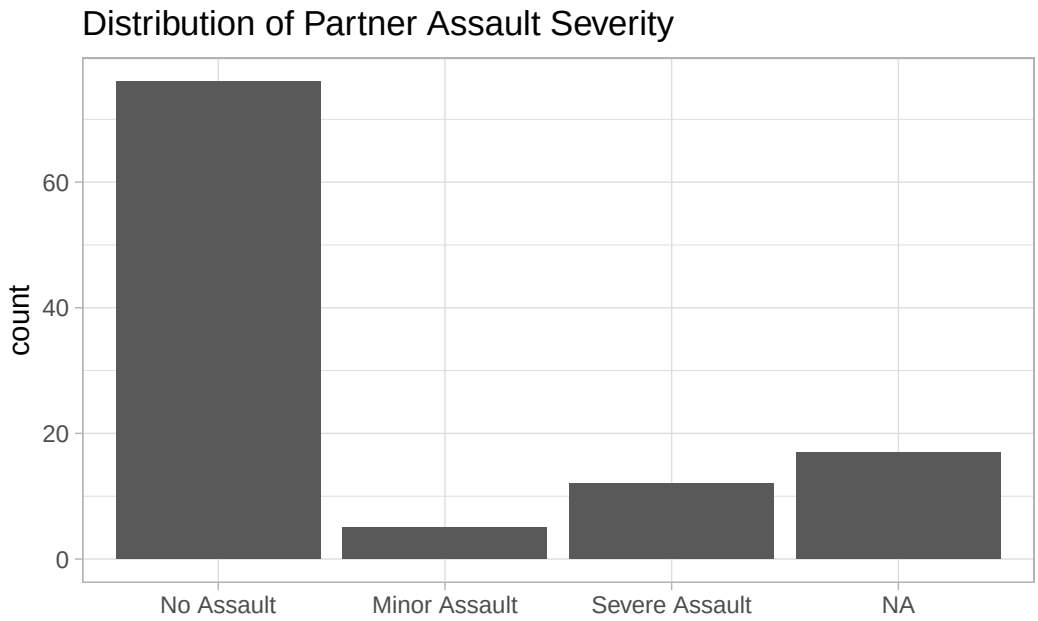
```
complete %>%
  mutate(
    cts_psy_agg_part_sev = case_when(
      cts_psy_agg_part_sev == 0 ~ 'No Psychological Aggression',
      cts_psy_agg_part_sev == 1 ~ 'Minor Psychological Aggression',
      cts_psy_agg_part_sev == 2 ~ 'Severe Psychological Aggression'
    ),
    cts_psy_agg_part_sev = as.factor(cts_psy_agg_part_sev),
    cts_psy_agg_part_sev = relevel(cts_psy_agg_part_sev, 'No Psychological Aggression')
    ) %>%
  ggplot(
    aes(
      cts_psy_agg_part_sev
    )
  ) +
  geom_bar() +
  labs(title = 'Distribution of Partner Psychological Aggression Severity',
       x = '')
```



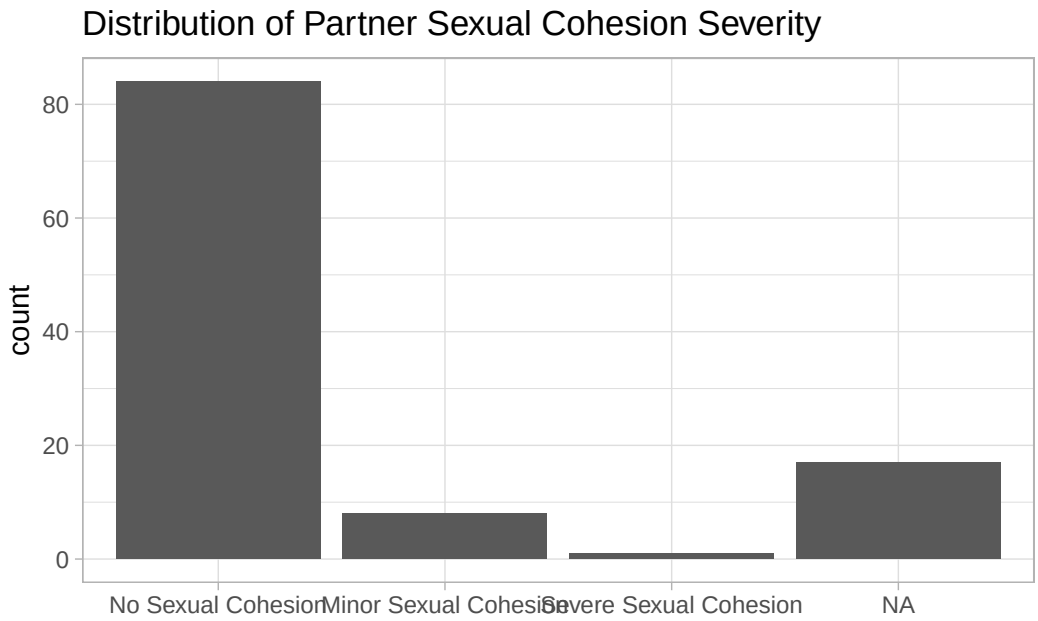

```
complete %>%
  mutate(
    cts_injury_part_sev = case_when(
      cts_injury_part_sev == 0 ~ 'No Injury',
      cts_injury_part_sev == 1 ~ 'Minor Injury',
      cts_injury_part_sev == 2 ~ 'Severe Injury'
    ),
    cts_injury_part_sev = as.factor(cts_injury_part_sev),
    cts_injury_part_sev = relevel(cts_injury_part_sev, 'No Injury')
  ) %>%
  ggplot(
    aes(
      cts_injury_part_sev
    )
  ) +
  geom_bar() +
  labs(title = 'Distribution of Partner Physical Injury Severity',
       x = '')
```




```
complete %>%
  mutate(
    cts_assault_part_sev = case_when(
      cts_assault_part_sev == 0 ~ 'No Assault',
      cts_assault_part_sev == 1 ~ 'Minor Assault',
      cts_assault_part_sev == 2 ~ 'Severe Assault'
    ),
    cts_assault_part_sev = as.factor(cts_assault_part_sev),
    cts_assault_part_sev = relevel(cts_assault_part_sev, 'No Assault')
  ) %>%
  ggplot(
    aes(
      cts_assault_part_sev
    )
  ) +
  geom_bar() +
  labs(title = 'Distribution of Partner Assault Severity',
       x = '')
```



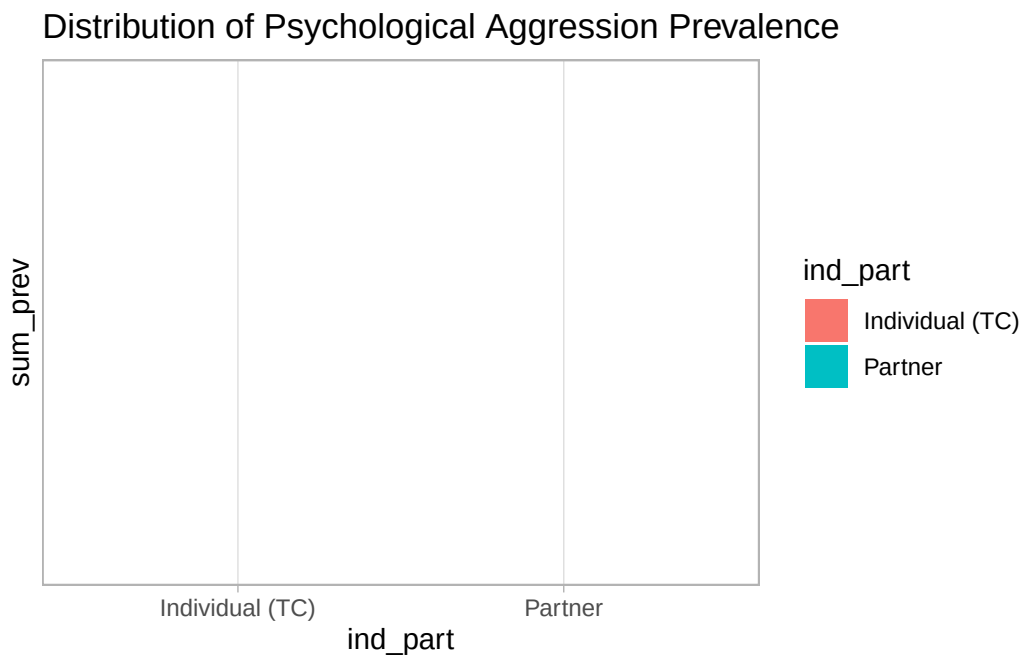

```
complete %>%
  mutate(
    cts_sex_part_sev = case_when(
      cts_sex_part_sev == 0 ~ 'No Sexual Cohesion',
      cts_sex_part_sev == 1 ~ 'Minor Sexual Cohesion',
      cts_sex_part_sev == 2 ~ 'Severe Sexual Cohesion'
    ),
    cts_sex_part_sev = as.factor(cts_sex_part_sev),
    cts_sex_part_sev = relevel(cts_sex_part_sev, 'No Sexual Cohesion')
  ) %>%
  ggplot(
    aes(
      cts_sex_part_sev
    )
  ) +
  geom_bar() +
  labs(title = 'Distribution of Partner Sexual Cohesion Severity',
       x = '')
```



5.2.5 CTS2S Prevalence Distributions

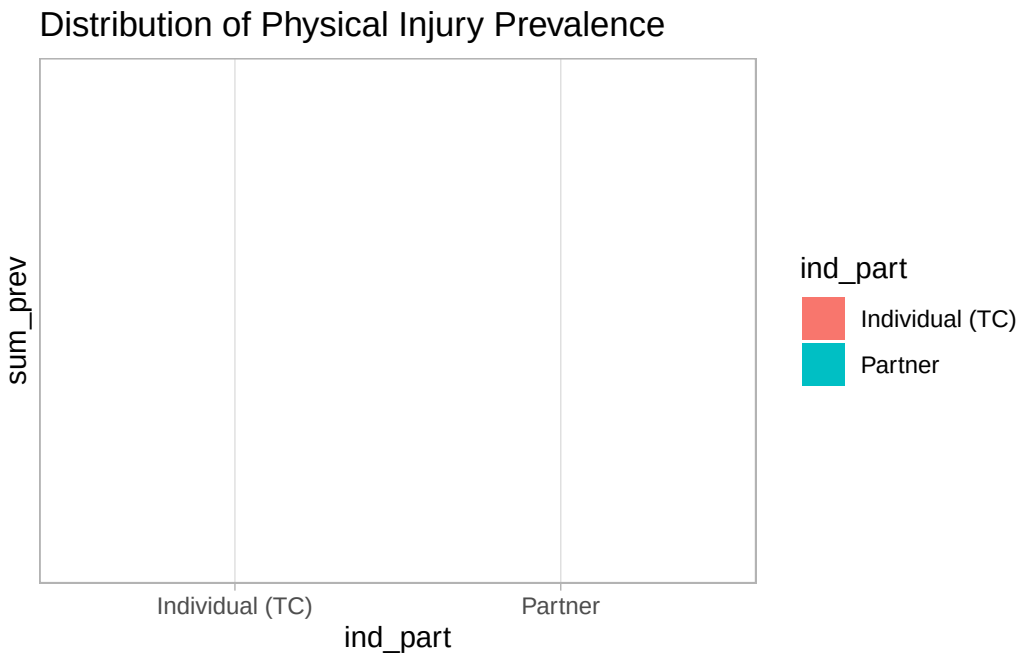
```
complete %>%
  pivot_longer(
    cols = c(cts_psy_agg_ind_prev, cts_psy_agg_part_prev),
    names_to = 'ind_part',
    values_to = 'prevalence'
  ) %>%
  mutate(
    ind_part = case_when(
      ind_part == 'cts_psy_agg_ind_prev' ~ 'Individual (TC)',
      ind_part == 'cts_psy_agg_part_prev' ~ 'Partner'
    )
  ) %>%
  group_by(ind_part) %>%
  mutate(
    sum_prev = sum(prevalence)
  ) %>%
  ungroup() %>%
  ggplot(
    aes(
```

```
      ind_part, sum_prev
    )
  ) +
  geom_col(
    aes(fill = ind_part),
    position = 'dodge'
  ) +
  labs(title = 'Distribution of Psychological Aggression Prevalence')
```



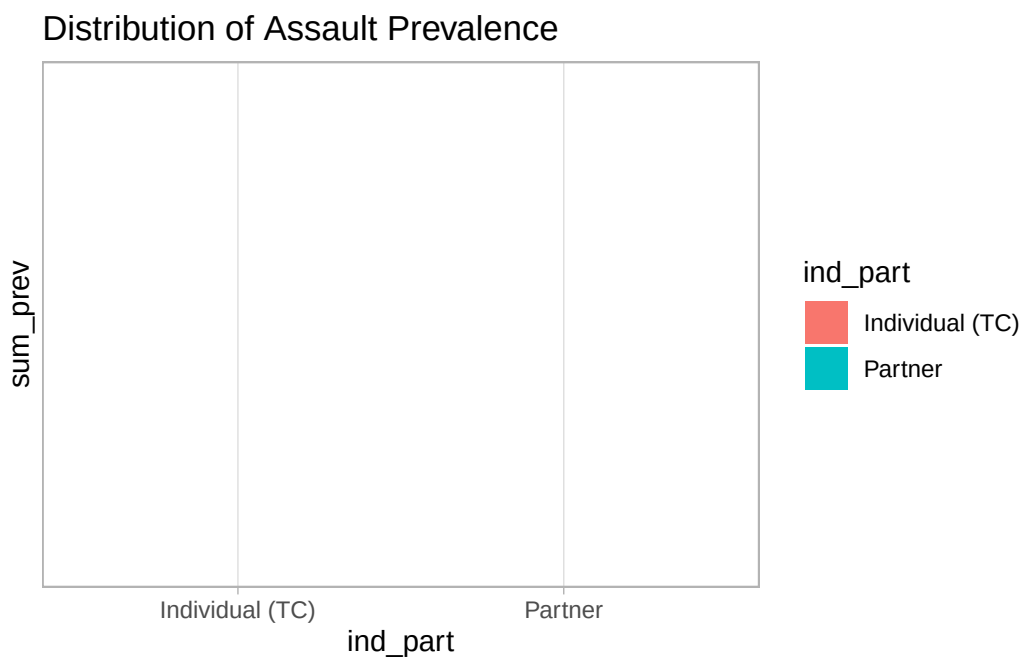

```
complete %>%
  pivot_longer(
    cols = c(cts_injury_ind_prev, cts_injury_part_prev),
    names_to = 'ind_part',
    values_to = 'prevalence'
  ) %>%
  mutate(
    ind_part = case_when(
      ind_part == 'cts_injury_ind_prev' ~ 'Individual (TC)',
      ind_part == 'cts_injury_part_prev' ~ 'Partner'
    )
  ) %>%
```

```
  group_by(ind_part) %>%
  mutate(
    sum_prev = sum(prevalence)
  ) %>%
  ungroup() %>%
  ggplot(
    aes(
      ind_part, sum_prev
    )
  ) +
  geom_col(
    aes(fill = ind_part),
    position = 'dodge'
  ) +
  labs(title = 'Distribution of Physical Injury Prevalence')
```

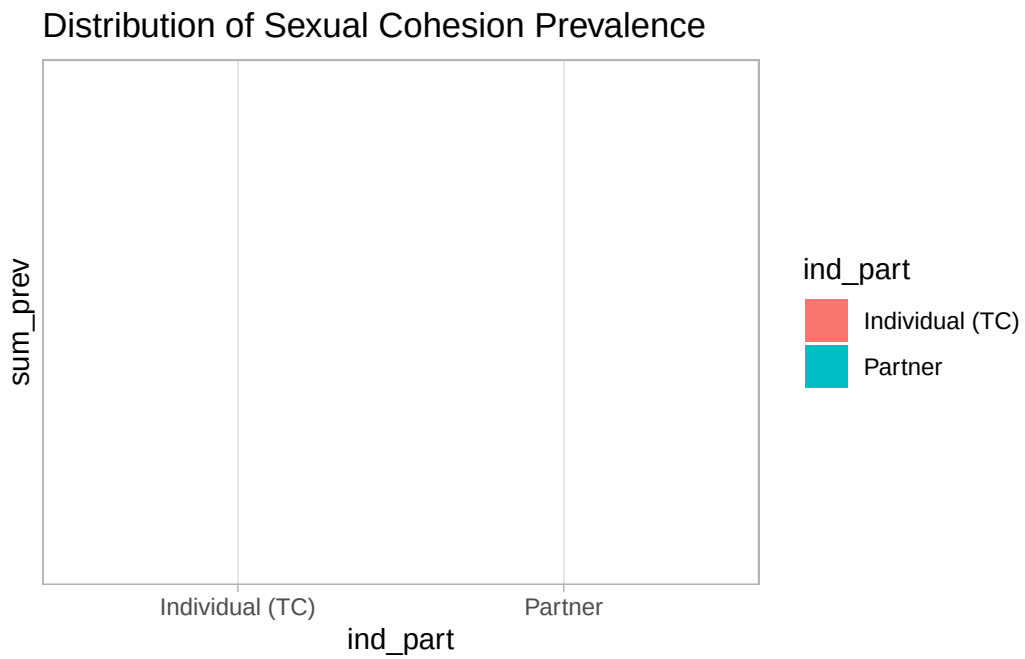



```
complete %>%
  pivot_longer(
    cols = c(cts_assault_ind_prev, cts_assault_part_prev),
    names_to = 'ind_part',
    values_to = 'prevalence'
```

```
) %>%
mutate(
  ind_part = case_when(
    ind_part == 'cts_assault_ind_prev' ~ 'Individual (TC)',
    ind_part == 'cts_assault_part_prev' ~ 'Partner'
  )
) %>%
group_by(ind_part) %>%
mutate(
  sum_prev = sum(prevalence)
) %>%
ungroup() %>%
ggplot(
  aes(
    ind_part, sum_prev
  )
) +
geom_col(
  aes(fill = ind_part),
  position = 'dodge'
) +
labs(title = 'Distribution of Assault Prevalence')
```

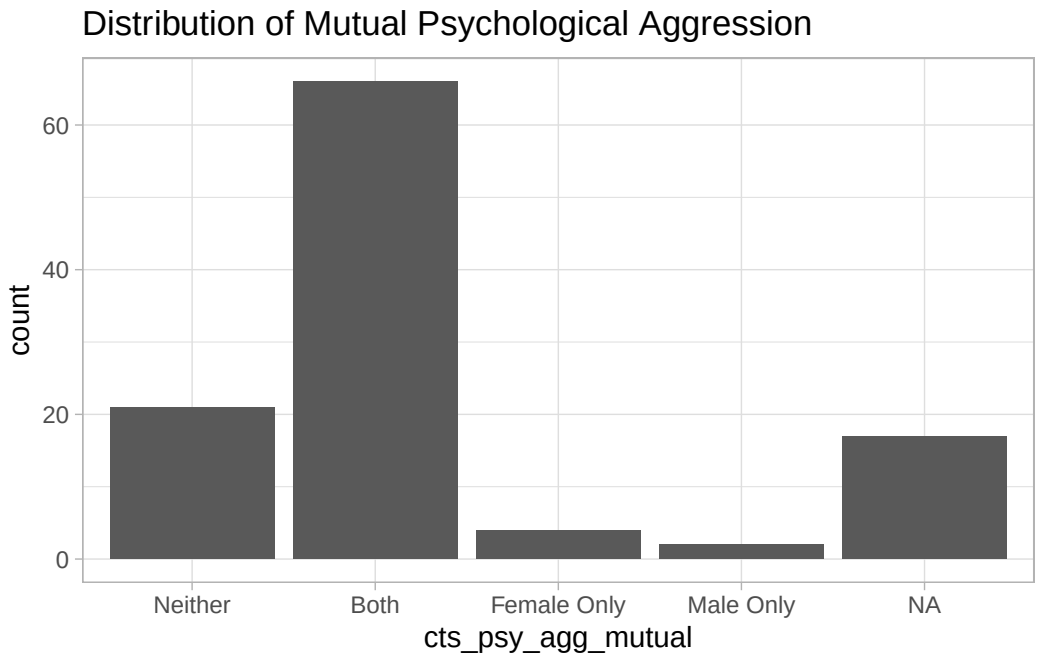


```r
complete %>%
  pivot_longer(
    cols = c(cts_sex_ind_prev, cts_sex_part_prev),
    names_to = 'ind_part',
    values_to = 'prevalence'
  ) %>%
  mutate(
    ind_part = case_when(
      ind_part == 'cts_sex_ind_prev' ~ 'Individual (TC)',
      ind_part == 'cts_sex_part_prev' ~ 'Partner'
    )
  ) %>%
  group_by(ind_part) %>%
  mutate(
    sum_prev = sum(prevalence)
  ) %>%
  ungroup() %>%
  ggplot(
    aes(
      ind_part, sum_prev
    )
  ) +
  geom_col(
    aes(fill = ind_part),
    position = 'dodge'
  ) +
  labs(title = 'Distribution of Sexual Cohesion Prevalence')
```

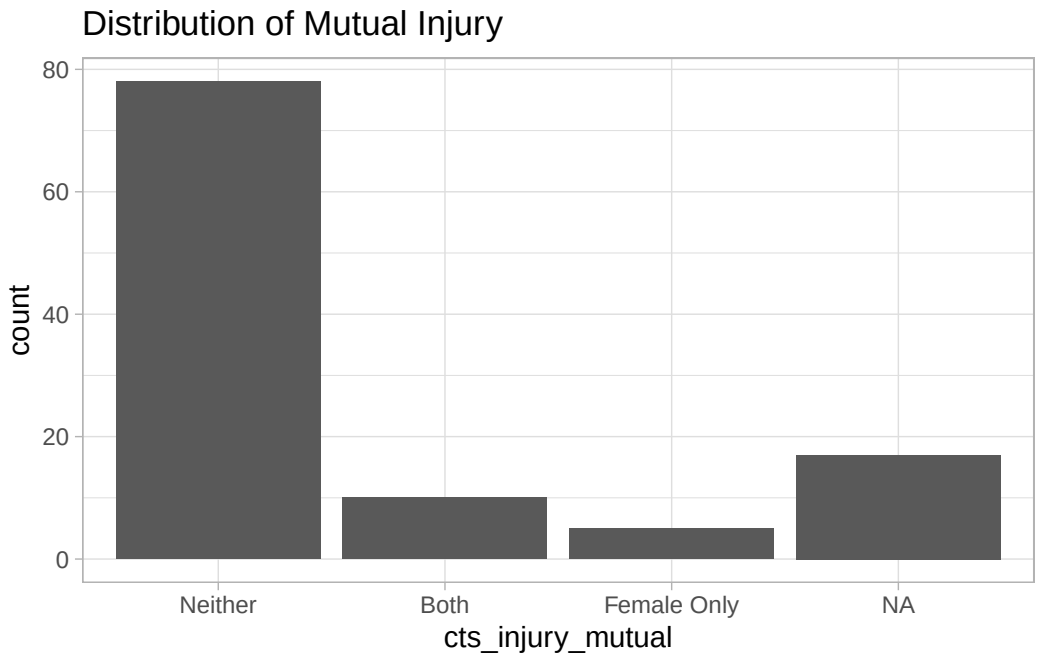


5.2.6 CTS2S Mutuality Distributions

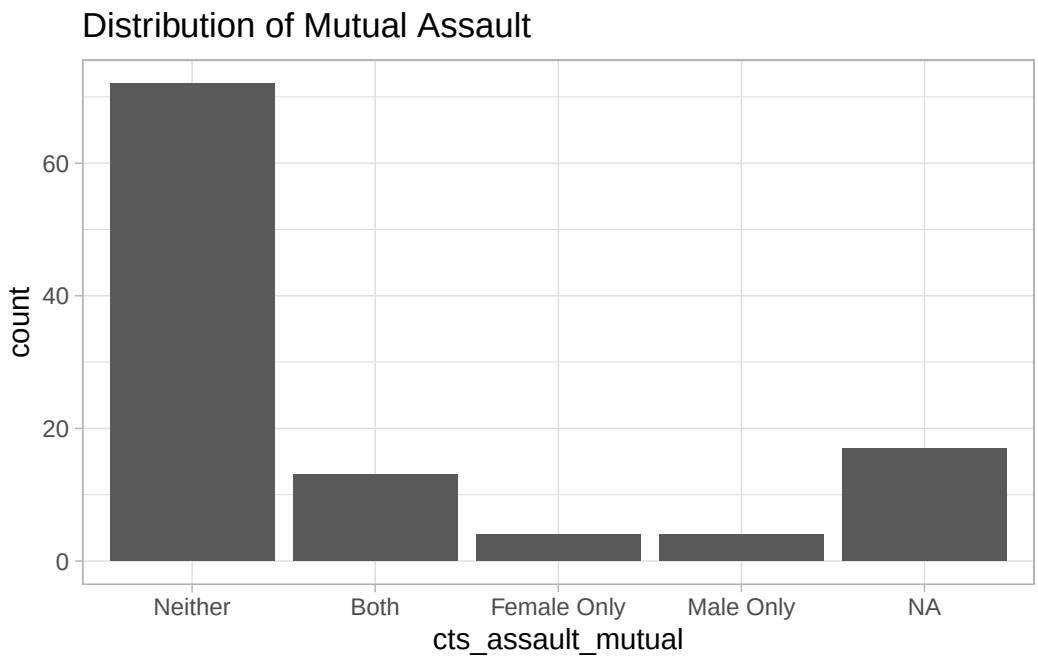
```
complete %>%
  mutate(
    cts_psy_agg_mutual = case_when(
      cts_psy_agg_mutual == 0 ~ 'Neither',
      cts_psy_agg_mutual == 1 ~ 'Male Only',
      cts_psy_agg_mutual == 2 ~ 'Female Only',
      cts_psy_agg_mutual == 3 ~ 'Both'
    ),
    cts_psy_agg_mutual = as.factor(cts_psy_agg_mutual),
    cts_psy_agg_mutual = relevel(cts_psy_agg_mutual, 'Neither')
  ) %>%
  ggplot(
    aes(
      cts_psy_agg_mutual
    )
  ) +
  geom_bar() +
  labs(title = 'Distribution of Mutual Psychological Aggression')
```



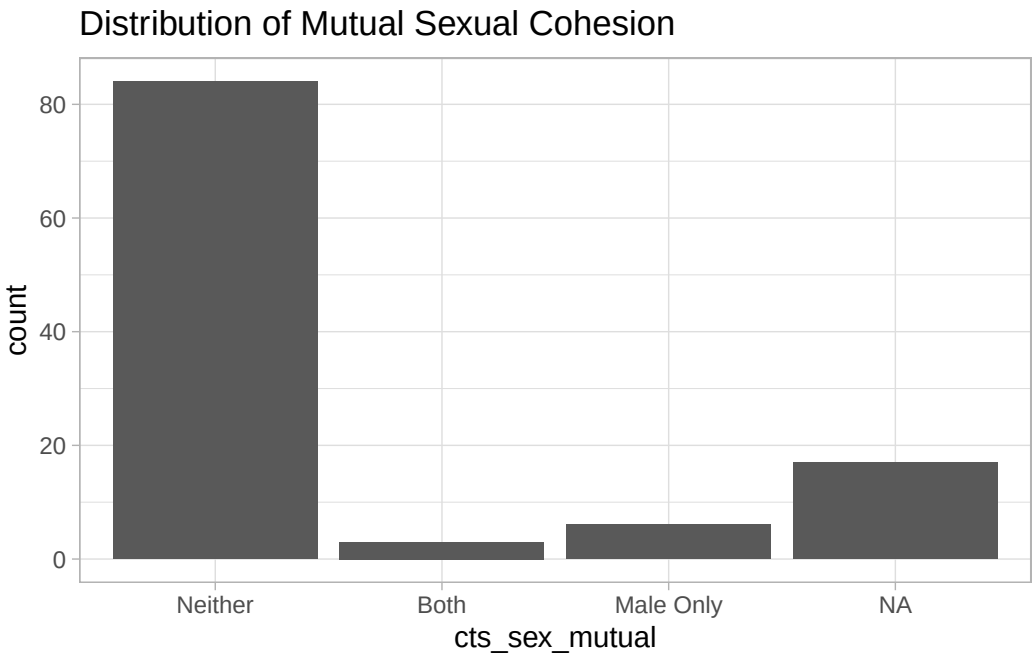

```r
complete %>%
  mutate(
    cts_injury_mutual = case_when(
      cts_injury_mutual == 0 ~ 'Neither',
      cts_injury_mutual == 1 ~ 'Male Only',
      cts_injury_mutual == 2 ~ 'Female Only',
      cts_injury_mutual == 3 ~ 'Both'
    ),
    cts_injury_mutual = as.factor(cts_injury_mutual),
    cts_injury_mutual = relevel(cts_injury_mutual, 'Neither')
  ) %>%
  ggplot(
    aes(
      cts_injury_mutual
    )
  ) +
  geom_bar() +
  labs(title = 'Distribution of Mutual Injury')
```




```
complete %>%
  mutate(
    cts_assault_mutual = case_when(
      cts_assault_mutual == 0 ~ 'Neither',
      cts_assault_mutual == 1 ~ 'Male Only',
      cts_assault_mutual == 2 ~ 'Female Only',
      cts_assault_mutual == 3 ~ 'Both'
    ),
    cts_assault_mutual = as.factor(cts_assault_mutual),
    cts_assault_mutual = relevel(cts_assault_mutual, 'Neither')
  ) %>%
  ggplot(
    aes(
      cts_assault_mutual
    )
  ) +
  geom_bar() +
  labs(title = 'Distribution of Mutual Assault')
```




```
complete %>%
  mutate(
    cts_sex_mutual = case_when(
      cts_sex_mutual == 0 ~ 'Neither',
      cts_sex_mutual == 1 ~ 'Male Only',
      cts_sex_mutual == 2 ~ 'Female Only',
      cts_sex_mutual == 3 ~ 'Both'
    ),
    cts_sex_mutual = as.factor(cts_sex_mutual),
    cts_sex_mutual = relevel(cts_sex_mutual, 'Neither')
  ) %>%
  ggplot(
    aes(
      cts_sex_mutual
    )
  ) +
  geom_bar() +
  labs(title = 'Distribution of Mutual Sexual Cohesion')
```



5.2.7 CTS2S Internal Reliability

- authors describe that internal reliability is not appropriate for the `CTS2S` measure.

References

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