**Title**: Subjective well-being and mental health: Dataset from a population survey

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**Version**: V1

**Summary**: This population survey measures subjective well-being and self-reported symptoms of three common mental health conditions: stress, anxiety, and depression. The survey also collects data about demographic breakdown of the city's race/ethnicity, gender, and socioeconomic composition. The data was collected in 2022 from 1281 participants in a face-to-face survey in Cali, Colombia's third largest city. To measure stress, the study used the Perceived Stress Scale (PSS-10) and the 7-item Generalized Anxiety Disorder Scale (GAD-7) to measure symptoms associated with anxiety (GAD-7), and the 9-item Patient Health Questionnaire (PHQ-9) to measure symptoms associated with depression.

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**Subject Terms**: Mental Health; Well-Being; Colombia; Life Satisfaction

**Geographic Coverage**: Cali, Colombia

**Smallest Geographic Unit**: City

**Distributor(s)**: Mendeley Data

**Curated by: Abigail Mor, Ishita Singh, Katy Lamb**

**Variables**

***Birth Year***

Participants were asked to report the year they were born in a fill-in-the-blank question. We did not use their birth year to determine their age because they may have taken the survey at different times throughout the current year. As a result, converting birth years to ages at a specific point in time (such as the survey start date) would inaccurately assume that all participants were surveyed simultaneously. This could lead to skewed age distributions if, for example, more younger individuals participated later in the survey period compared to older individuals.

***Gender***

Participants were asked to report whether they identify as male, female, or other. It is important to note that because the original researchers grouped all other gender identities under one category, “other,” the accuracy of any demographic distributions or analyses conducted using this survey question will be negatively affected.

***Socioeconomic Status***

The socioeconomic status (SES) variable captures the economic and social standing of participants' households within society. Respondents were asked to indicate the socio-economic status of their home on a scale of 1 to 6, with 1 representing the lowest status and 6 representing the highest status. The scale is based on Colombia’s strata system, which divides the Colombian population into six distinct groups based on similar social and economic characteristics (Bogotastic, 2018). In this sheet, we labeled the six strata as lower-low, low, upper-low, medium, medium-high, and high (Wikimedia Foundation, 2023).

***Demographic Background***

The demographic background variable captures the racial/ethnic background of participants. Respondents were asked to indicate one of the following categories: Indigenous [1]; Gypsy [2]; Raizal from San Andres, Providencia and Santa Catalina Archipelago[3]; Palenquero from San Basilio[4]; Black, mulatto (Afro-descendant), Afro-Colombian [5]; None of the Above [6]. The modal response was none of the above, and the second most frequent response was 5 (Black, mulatto (Afro-descendant), Afro-Colombian).

***Parental Education***

The parental education variable asks participants to submit how many years of education their mother and their father have (*mother\_ed; father\_ed*). From the current sample, in years of education, responses ranged from 0 to 20 years for fathers (with 282 blank answers), and ranged from 0 to 25 years for mothers (with 203 blank answers).

***Subjective Well-Being***

Subjective Well-Being encompasses individuals' overall satisfaction with life and their emotional experiences. The scale measures general life satisfaction, with participants rating their satisfaction on a scale from 0 to 10. Additionally, participants report their emotional experiences from the previous day on a scale of 0 to 10, including feelings of happiness, laughter, learning, enjoyment, worry, depression, anger, stress, and loneliness. The generated scale for this survey was influenced by various other existing well-being scales (Kapteyn et al., 2015).

***PSS-10 Perceived Stress Scale***

The Perceived Stress Scale (PSS) is a classic stress assessment instrument. This scale helps us understand how different situations affect our feelings and our perceived stress. The ten questions in this scale ask individuals about the frequency of certain feelings and thoughts during the last month on a scale from 0 to 4, with 0 being “never” and 4 being “very often.” After receiving responses (*PSS-10\_X)*, scores for perceived stress were calculated by summing the responses to all questions (*PSS-10\_Score)*; question 4, 5, 7, and 8 were reverse-coded. The severity of perceived stress was based on the original scale interpretation (*PSS-10\_Severity*) (See codebook).

***GAD-7 Anxiety Scale***

The GAD-7 is also a validated and reliable measure used in both the research and healthcare fields, but it is used as a screening tool to assess one’s symptoms of anxiety. It includes seven symptoms of anxiety, which are scored according to their frequency: “not at all” to “nearly every day,” coded on an ordinal scale from 1 to 4 respectively (*GAD-7\_X*). Examples of these symptoms include feeling nervous/ on-edge, uncontrollable worrying, and restlessness. Also for these variables, there are the original survey responses in character form as well as a copy of the responses in numerical form. The numerical form of the responses were later used to create a composite score, or a summed score, that allows for interpretation of anxiety severity (*GAD-7\_Score*). The severity of each individual's anxiety was based on the original scale interpretation (*GAD-7\_Severity*) (See Codebook).

***PHQ-9 Quick Depression Assessment***

The PHQ-9 is a validated and reliable assessment of depression that is used by both researchers and healthcare professionals. It scores each of the nine DSM-5 criteria for depression on a scale from “not at all” to “nearly every day,” coded as on an ordinal scale of 1 to 4 respectively (*PHQ-9\_X*). Examples of these criteria include having little interest in doing things, feeling down, and having sleep issues. In the dataset, there are the original survey responses in character form as well as a copy of the responses in numerical form. The numerical form of the responses were later used to create a composite score, or a summed score, that allows for interpretation of depression severity (*PHQ-9\_Score*). The severity of each individual's depression was based on the original scale interpretation (*PHQ-9\_Severity*) (See Codebook).

**Potential Analyses**

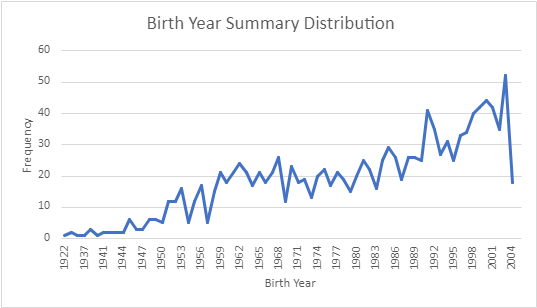
This dataset is rich with variables that could be used for interesting analyses. Since the data was collected via an online survey, causality cannot be concluded, so correlations would be the most appropriate type of analysis to conduct. Students could even organize the correlations they are interested in testing by creating separate spreadsheets that only contain the columns of data associated with the variables they’re analyzing. For example, we created an example sub-sheet that contains the participant ID and the cumulative scores of the PSS-10 and GAD-7 scores and level of severity. A separate sheet within the dataset that compiles target variables could therefore be useful for convenience and smaller analyses. Below, we have also listed additional possible research questions that correlation tests can explore:

1. Is there a correlation between participants’ cumulative level of severity on the PSS-10 and the GAD-7?
   1. This analysis would be useful for researching a relationship between stress and anxiety. For example, are participants with a higher level of stress more likely to also have a higher level of anxiety? Does stress appear to cause anxiety, or does pre-existing anxiety predispose someone to higher stress levels?
2. Is there a correlation between age and cumulative stress severity?
   1. Additionally, is there a correlation between gender and cumulative stress severity?
   2. Using the PSS-10 cumulative severity column, it would be interesting to research whether demographic variables are associated with higher or lower levels of stress. Students could also try to connect their results to society’s larger social dynamics (e.g., mental health stigmas, gender discrimination).
3. Is there a correlation between parental education and reported socioeconomic status?
   1. Are less years of parental education associated with a higher or lower socioeconomic status?
   2. It is important to note that this analysis would not take the participant’s education into account. Depending on the age of the participants, their number of educational years may have more of an effect on their current socioeconomic status than those of their parents. Therefore, students should be careful about drawing definite conclusions with this analysis.
4. Is there a correlation between participants’ subjective well-being and their cumulative severity of anxiety?
   1. Specifically, students could compare participants’ responses to *swb\_6* (see Codebook below) and their cumulative GAD-7 score to explore if their reported level of worry is associated with higher anxiety scores.
5. What are the predictors of either perceived stress, anxiety, or depression?
   1. Students can run regression analyses using the dataset to unterstand if any of the other variables are predictive of these specific mental health variables.

**Codebook**

Demographic Data → *N*= 1306

1. ***year\_1***:Year of birth
   1. Fill-in-the-blank question, where participants self-reported the year they were born. Responses ranged from 1922 to 2004. There was one blank answer.
   2. Graphical frequency distribution of the responses:



1. ***gender\_1***: Gender

[1] - Male

n= 652

[2] - Female

n= 650

[3] - Other

n= 0

1. ***ses\_1***: What is the socio-economic status of your home?

[1] - lower-low

n= 311

[2] - low

n= 349

[3] - upper-low

n= 385

[4] - medium

n= 137

[5] - medium-high

n= 101

[6] - high

n= 18

[Blank] - No answer provided

n= 5

1. ***demographic\_1***: According to your culture, people, or physical features, you are or are recognized as:

[1] - Indigenous

n= 107

[2] - Gypsy

n= 4

[3] - Raizal from San Andres, Providencia and Santa Catalina Archipelago

n= 2

[4] - Palenquero from San Basilio

n= 0

[5] - Black, mulatto (Afro-descendant), Afro-Colombian

n= 346

[6] - None of the Above

n= 842

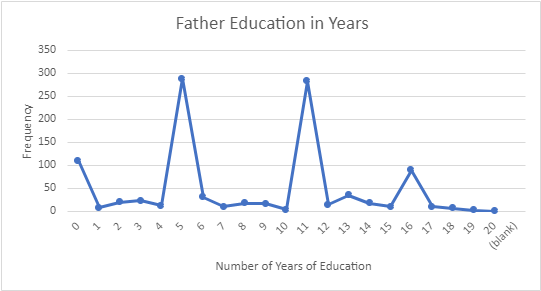
[Blank] - No answer provided

n= 5

1. Parental Education

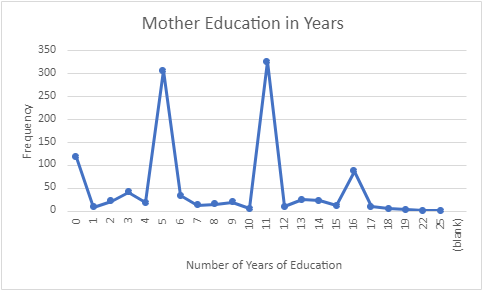
***father\_ed***: How many years of education did your parents receive? Father

* 1. Fill-in-the-blank question, where participants self-reported their father’s education in years. Responses ranged from 0 to 20 years. There were 282 blank answers.
  2. Graphical frequency distribution of the responses:



***mother\_ed***: How many years of education did your parents receive? Mother

* 1. Fill-in-the-blank question, where participants self-reported their mother’s education in years. Responses ranged from 0 to 25 years. There were 203 blank answers.
  2. Graphical frequency distribution of the responses:



**Subjective Well Being**

***swb\_X:*** Subjective Well Being

1. In general, how satisfied are you with all aspects of your life? With 0 being not satisfied, and 10 being totally satisfied.

| Response | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| # | 11 | 2 | 7 | 5 | 16 | 73 | 68 | 166 | 302 | 148 | 508 |

*The following questions are about how you felt yesterday on a scale of 0 to 10. Zero means that you didn't experience these feelings “at no time” while 10 means that you experienced these feelings “all the time”.*

1. How happy did you feel yesterday?

| Response | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | Blank |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| # | 28 | 5 | 26 | 21 | 29 | 107 | 53 | 108 | 194 | 161 | 573 | 1 |

1. How much did you laugh yesterday?

| Response | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | Blank |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| # | 69 | 19 | 39 | 43 | 41 | 148 | 63 | 104 | 182 | 111 | 481 | 6 |

1. Did you learn new or exciting things yesterday?

| Response | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | Blank |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| # | 107 | 15 | 42 | 33 | 36 | 218 | 101 | 138 | 198 | 109 | 304 | 5 |

1. How much did you enjoy the activities you did yesterday?

| Response | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | Blank |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| # | 42 | 11 | 15 | 27 | 35 | 102 | 56 | 108 | 198 | 149 | 560 | 3 |

1. How worried did you feel yesterday?

| Response | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | Blank |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| # | 435 | 44 | 96 | 85 | 56 | 140 | 69 | 81 | 96 | 56 | 146 | 2 |

1. How depressed did you feel yesterday?

| Response | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | Blank |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| # | 721 | 55 | 89 | 74 | 37 | 94 | 42 | 40 | 53 | 31 | 67 | 3 |

1. How angry did you feel yesterday?

| Response | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | Blank |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| # | 762 | 68 | 88 | 69 | 45 | 75 | 29 | 29 | 37 | 31 | 72 | 1 |

1. How much stress did you feel yesterday?

| Response | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | Blank |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| # | 573 | 48 | 87 | 81 | 52 | 114 | 57 | 58 | 71 | 44 | 117 | 4 |

1. How lonely or unsupported did you feel yesterday?

| Response | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | Blank |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| # | 782 | 53 | 67 | 52 | 34 | 85 | 33 | 43 | 61 | 20 | 73 | 3 |

**Health**

***PSS-10\_X***: Next, you will be asked questions about your emotional state. Please answer on a scale of 0 to 4, where 0 is never, 1 is 'almost never', 2 is 'sometimes', 3 is 'fairly often,' and 4 is 'very often', How often you experienced the following feelings during the last month

1. In the last month, how often have you been upset because of something that happened unexpectedly?

| Response | 0 | 1 | 2 | 3 | 4 | Blank |
| --- | --- | --- | --- | --- | --- | --- |
| # | 457 | 293 | 298 | 152 | 105 | 1 |

1. In the last month, how often have you felt that you were unable to control the important things in your life?

| Response | 0 | 1 | 2 | 3 | 4 |
| --- | --- | --- | --- | --- | --- |
| # | 524 | 251 | 314 | 134 | 83 |

1. How often have you felt nervous and stressed?

| Response | 0 | 1 | 2 | 3 | 4 | Blank |
| --- | --- | --- | --- | --- | --- | --- |
| # | 382 | 182 | 339 | 198 | 202 | 3 |

1. (Reverse-coded)How often have you felt confident about your ability to handle your personal problems?

| Response | 0 | 1 | 2 | 3 | 4 | Blank |
| --- | --- | --- | --- | --- | --- | --- |
| # | 529 | 372 | 262 | 78 | 59 | 6 |

1. (Reverse-coded)How often have you felt that things were going your way?

| Response | 0 | 1 | 2 | 3 | 4 | Blank |
| --- | --- | --- | --- | --- | --- | --- |
| # | 499 | 448 | 263 | 61 | 27 | 8 |

1. How often you experienced the following feelings during the last month: how often have you found that you could not cope with all the things that you had to do?

| Response | 0 | 1 | 2 | 3 | 4 | Blank |
| --- | --- | --- | --- | --- | --- | --- |
| # | 388 | 329 | 340 | 172 | 71 | 6 |

1. (Reverse-coded)How often have you been able to control irritations in your life?

| Response | 0 | 1 | 2 | 3 | 4 | Blank |
| --- | --- | --- | --- | --- | --- | --- |
| # | 409 | 426 | 320 | 83 | 59 | 9 |

1. (Reverse-coded)How often have you felt that you were on top of things?

| Response | 0 | 1 | 2 | 3 | 4 | Blank |
| --- | --- | --- | --- | --- | --- | --- |
| # | 334 | 409 | 363 | 123 | 75 | 2 |

1. How often have you been angered because of things that happened that were outside of your control?

| Response | 0 | 1 | 2 | 3 | 4 | Blank |
| --- | --- | --- | --- | --- | --- | --- |
| # | 351 | 260 | 332 | 226 | 136 | 1 |

1. How often have you felt difficulties were piling up so high that you could not overcome them?

| Response | 0 | 1 | 2 | 3 | 4 | Blank |
| --- | --- | --- | --- | --- | --- | --- |
| # | 507 | 250 | 316 | 153 | 78 | 2 |

***PSS-10\_Score/Severity***: Based on previous PSS-10\_X responses, individuals’ cumulative scores for perceived stress were calculated and then categorized for level of severity:

* 0–13: low stress
  + n= 673
* 14–26: moderate stress
  + n= 592
* 27–40: high perceived stress
  + n= 41
* Range: 0-38
* Modal Response: 12

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***GAD-7\_X***: Next, you will be asked questions about your emotional state. Please answer on a scale of 0 to 3, where 0 is 'Not at all', 1 is 'several days', 2 is 'more than half of the days', and 3 is 'Nearly every day'. Over the last two weeks, how often have you been bothered by the following problems?

1. Feeling nervous, anxious, or on edge

| Response | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | Blank |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| # | 664 | 307 | 183 | 151 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |

1. Not being able to stop or control worrying

| Response | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | Blank |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| # | 806 | 249 | 149 | 110 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |

1. Worrying too much about different things

| Response | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | Blank |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| # | 687 | 299 | 178 | 140 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |

1. Trouble relaxing

| Response | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | Blank |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| # | 799 | 229 | 152 | 120 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 |

1. Being so restless that it is hard to sit still

| Response | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | Blank |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| # | 706 | 258 | 176 | 161 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 |

1. Becoming easily annoyed or irritable

| Response | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | Blank |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| # | 711 | 285 | 158 | 150 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |

1. Feeling afraid, as if something awful might happen

| Response | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | Blank |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| # | 766 | 226 | 157 | 155 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |

***GAD-7\_Score/Severity:*** Based on previous gad7\_X responses, individuals’ cumulative scores for anxiety severity were calculated and then categorized for level of severity:

* 0–4: minimal anxiety
  + n= 739
* 5–9: mild anxiety
  + n= 279
* 10–14: moderate anxiety
  + n= 156
* 15–21: severe anxiety
  + n= 132
* Range: 0-21
* Modal Response: 0

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***PHQ-9\_X:*** Next, you will be asked questions about your emotional state. Please answer on a scale of 0 to 3, where 0 is 'Not at all', 1 is 'several days', 2 is 'more than half of the days', and 3 is 'Nearly every day'. Over the last two weeks, how often have you been bothered by the following problems?:

1. Little interest or pleasure in doing things

| Response | 0 | 1 | 2 | 3 | Blank |
| --- | --- | --- | --- | --- | --- |
| # | 805 | 268 | 144 | 88 | 1 |

1. Feeling down, depressed, or hopeless

| Response | 0 | 1 | 2 | 3 | Blank |
| --- | --- | --- | --- | --- | --- |
| # | 810 | 248 | 151 | 97 | 0 |

1. Trouble falling or staying asleep, or sleeping too much

| Response | 0 | 1 | 2 | 3 | Blank |
| --- | --- | --- | --- | --- | --- |
| # | 700 | 218 | 182 | 202 | 4 |

1. Feeling tired or having little energy

| Response | 0 | 1 | 2 | 3 | Blank |
| --- | --- | --- | --- | --- | --- |
| # | 540 | 341 | 244 | 177 | 4 |

1. Poor appetite or overeating

| Response | 0 | 1 | 2 | 3 | Blank |
| --- | --- | --- | --- | --- | --- |
| # | 783 | 196 | 182 | 141 | 4 |

1. Feeling bad about yourself or that you are a failure or have let yourself or your family down

| Response | 0 | 1 | 2 | 3 | Blank |
| --- | --- | --- | --- | --- | --- |
| # | 888 | 203 | 116 | 95 | 4 |

1. Trouble concentrating on things, such as reading the newspaper or watching television

| Response | 0 | 1 | 2 | 3 | Blank |
| --- | --- | --- | --- | --- | --- |
| # | 825 | 215 | 162 | 100 | 4 |

1. Moving or speaking so slowly that other people could have noticed. Or the opposite being so figety or restless that you have been moving around a lot more than usual

| Response | 0 | 1 | 2 | 3 | Blank |
| --- | --- | --- | --- | --- | --- |
| # | 952 | 176 | 104 | 72 | 2 |

1. Thoughts that you would be better off dead, or of hurting yourself

| Response | 0 | 1 | 2 | 3 | Blank |
| --- | --- | --- | --- | --- | --- |
| # | 1109 | 94 | 51 | 45 | 7 |

***phq9\_Score/phq9\_severity:*** Based on previous phq9\_XNUM responses, individuals’ cumulative scores for depression severity were calculated then categorized.

* 0: None
  + n = 263
* 1-4: Minimal depression
  + n= 456
* 5-9: Mild depression
  + n= 291
* 10-14: Moderate depression
  + n= 154
* 15-19: Moderately severe depression
  + n= 83
* 20-27: Severe depression
  + n= 59
* Range : 0-27
* Modal Response: 0

**Citations**

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