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The Link between Mental Health and College Students in the New Normal of Tertiary Education

(Strengthening college students' coping mechanisms toward mental stability
amid the challenges of the new normal in tertiary education.)

I. About the dataset

The dataset to be used is based on the global survey dataset entitled, “Impacts of the Covid-19 Pandemic on Life of Higher Education Students: Global Survey Dataset from the First Wave”, which is aligned to the topic of the proponents about the relationship between the mental health and college students in the new normal of tertiary education.

The dataset consists of thirty-one thousand and two hundred twelve (31,212) responses from one hundred thirty-three (133) countries and six (6) continents. The main respondents of the online questionnaire were the tertiary students enrolled in a higher education institution.

Last but not least, the online questionnaire covers various aspects of college students such as their socio-demographic, academic characteristics, academic life, computer skills, social life, emotional life, and life circumstances which all contribute to the mental health of a college student.

Reference:

Aristovnik, A. (2021, December 23). *Impacts of the COVID-19 pandemic on life of Higher Education Students: Global Survey dataset from the first wave*. Mendeley Data. Retrieved May 2, 2022, from <https://data.mendeley.com/datasets/88y3nffs82/5>

II. Analysis on the dataset

The proponents of the study decided to focus on *Asian countries only* present in the dataset and will only utilize the *first one hundred (100) responses per country with bachelor's degree* as their current level of study. The forty-five (45) Asian countries present in the dataset are the following:

- | | |
|---------------|-------------|
| ● Afghanistan | ● Cyprus |
| ● Armenia | ● Georgia |
| ● Azerbaijan | ● India |
| ● Bahrain | ● Indonesia |
| ● Bangladesh | ● Iran |
| ● Bhutan | ● Iraq |
| ● Brunei | ● Israel |
| ● Cambodia | ● Japan |
| ● China | ● Jordan |

- Kazakhstan
- Kuwait
- Kyrgyzstan
- Laos
- Lebanon
- Malaysia
- Maldives
- Mongolia
- Myanmar
- Nepal
- Oman
- Pakistan
- Palestinian State
- Philippines
- Qatar
- Saudi Arabia
- Singapore
- Sri Lanka
- Syria
- Tajikistan
- Thailand
- Turkey
- Turkmenistan
- United Arab Emirates
- Uzbekistan
- Vietnam
- Yemen

The proponents reviewed the questionnaire and the columns to be used based from the dataset and questionnaire which are useful and will contribute to the visualization of the project topic are the following:

- **Q1** - Country
- **Q5** - Level of study
 - 1: "Bachelor's Degree"
- **Q6** - Main field of study
 - 1: "Arts", 2: "Social", 3: "Natural", 4: "Technical"
- **Q7** - Age
 - under 18, 18-20, 20-24, and over 24 years old
- **Q8** - Gender
 - 1: "Male", 2: "Female", 3: "Gender diverse", 4: "Prefer not to say"
- **Q17** - Amount of workload
 - 1: "Significantly smaller", 2: "Smaller", 3: "The same", 4: "Larger", 5: "Significantly larger"
- **Q20a** - Difficulty on focusing rate
 - 1: "Strongly disagree", 2: "Disagree", 3: "Natural", 4: "Agree", 5: "Strongly agree"
- **Q20b** - Performance improved rate
 - 1: "Strongly disagree", 2: "Disagree", 3: "Natural", 4: "Agree", 5: "Strongly agree"
- **Q20c** - Performance worsen rate
 - 1: "Strongly disagree", 2: "Disagree", 3: "Natural", 4: "Agree", 5: "Strongly agree"

- **Q20d** - Adapted well to new setup rate
1: "Strongly disagree", 2: "Disagree", 3: "Natural", 4: "Agree",
5: "Strongly agree"
- **Q20e** - Master the skills taught in class rate
1: "Strongly disagree", 2: "Disagree", 3: "Natural", 4: "Agree",
5: "Strongly agree"
- **Q20f** - Can do most difficult classwork rate
1: "Strongly disagree", 2: "Disagree", 3: "Natural", 4: "Agree",
5: "Strongly agree"
- **Q21c** - Access on computer rate
1: "Never", 2: "Rarely", 3: "Sometimes", 4: "Often", 5: "Always"
- **Q21i** - Good internet connection rate
1: "Never", 2: "Rarely", 3: "Sometimes", 4: "Often", 5: "Always"
- **Q22a** - Browsing online information rate
1: "Strongly disagree", 2: "Disagree", 3: "Natural", 4: "Agree",
5: "Strongly agree"
- **Q22b** - Sharing digital content rate
1: "Strongly disagree", 2: "Disagree", 3: "Natural", 4: "Agree",
5: "Strongly agree"
- **Q23a** - Communication with close family member rate
1: "Not at all", 2: "Two or three times a month", 3: "Once a week",
4: "Several times a week", 5: "Once a day", 6: "Several times a day"
- **Q23b** - Communication with more distant family member
1: "Not at all", 2: "Two or three times a month", 3: "Once a week",
4: "Several times a week", 5: "Once a day", 6: "Several times a day"
- **Q23c** - Communication with close friend
1: "Not at all", 2: "Two or three times a month", 3: "Once a week",
4: "Several times a week", 5: "Once a day", 6: "Several times a day"
- **Q23d** - Communication with someone I live with
1: "Not at all", 2: "Two or three times a month", 3: "Once a week",
4: "Several times a week", 5: "Once a day", 6: "Several times a day"
- **Q23e** - Communication with neighbors
1: "Not at all", 2: "Two or three times a month", 3: "Once a week",
4: "Several times a week", 5: "Once a day", 6: "Several times a day"
- **Q23f** - Communication with colleague from my course
1: "Not at all", 2: "Two or three times a month", 3: "Once a week",
4: "Several times a week", 5: "Once a day", 6: "Several times a day"

- **Q23g** - Communication with lecturer
 - 1: "Not at all", 2: "Two or three times a month", 3: "Once a week", 4: "Several times a week", 5: "Once a day", 6: "Several times a day"
- **Q23h** - Communication with administrative staff
 - 1: "Not at all", 2: "Two or three times a month", 3: "Once a week", 4: "Several times a week", 5: "Once a day", 6: "Several times a day"
- **Q23i** - Communication with voluntary organizations
 - 1: "Not at all", 2: "Two or three times a month", 3: "Once a week", 4: "Several times a week", 5: "Once a day", 6: "Several times a day"
- **Q23j** - Communication with social networks
 - 1: "Not at all", 2: "Two or three times a month", 3: "Once a week", 4: "Several times a week", 5: "Once a day", 6: "Several times a day"
- **Q24b** - Person there for you if you felt down or depressed
 - 1: "Close family member", 2: "More distant family member", 3: "Close friend", 4: "Someone I live with (e.g. roommate)", 5: "Neighbors", 6: "Colleague from my course", 7: "Lecturer", 8: "Administrative staff", 9: "Voluntary organizations", 10: "Social networks", 12: "No one"
- **Q25a** - Joyful emotion rate while attending class or studying
 - 1: "Never", 2: "Rarely", 3: "Sometimes", 4: "Often", 5: "Always"
- **Q25b** - Hopeful emotion rate while attending class or studying
 - 1: "Never", 2: "Rarely", 3: "Sometimes", 4: "Often", 5: "Always"
- **Q25c** - Proud emotion rate while attending class or studying
 - 1: "Never", 2: "Rarely", 3: "Sometimes", 4: "Often", 5: "Always"
- **Q25d** - Frustrated emotion rate while attending class or studying
 - 1: "Never", 2: "Rarely", 3: "Sometimes", 4: "Often", 5: "Always"
- **Q25e** - Angry emotion rate while attending class or studying
 - 1: "Never", 2: "Rarely", 3: "Sometimes", 4: "Often", 5: "Always"
- **Q25f** - Anxious emotion rate while attending class or studying
 - 1: "Never", 2: "Rarely", 3: "Sometimes", 4: "Often", 5: "Always"
- **Q25g** - Ashamed emotion rate while attending class or studying
 - 1: "Never", 2: "Rarely", 3: "Sometimes", 4: "Often", 5: "Always"
- **Q25h** - Relived emotion rate while attending class or studying
 - 1: "Never", 2: "Rarely", 3: "Sometimes", 4: "Often", 5: "Always"

- **Q25i** - Hopeless emotion rate while attending class or studying
1: "Never", 2: "Rarely", 3: "Sometimes", 4: "Often", 5: "Always"
- **Q25j** - Bored emotion rate while attending class or studying
1: "Never", 2: "Rarely", 3: "Sometimes", 4: "Often", 5: "Always"
- **Q26a** - Worrying about personal physical health rate
1: "A little of the time", 2: "Some of the time", 3: "A good part of the time",
4: "Most of the time", 5: "All of the time"
- **Q26b** - Worrying about personal mental health rate
1: "A little of the time", 2: "Some of the time", 3: "A good part of the time",
4: "Most of the time", 5: "All of the time"
- **Q26c** - Worrying about studying issues rate
1: "A little of the time", 2: "Some of the time", 3: "A good part of the time",
4: "Most of the time", 5: "All of the time"
- **Q26d** - Worrying about future education rate
1: "A little of the time", 2: "Some of the time", 3: "A good part of the time",
4: "Most of the time", 5: "All of the time"
- **Q26e** - Worrying about personal finances rate
1: "A little of the time", 2: "Some of the time", 3: "A good part of the time",
4: "Most of the time", 5: "All of the time"
- **Q26f** - Worrying about family and relationship rate
1: "A little of the time", 2: "Some of the time", 3: "A good part of the time",
4: "Most of the time", 5: "All of the time"
- **Q26g** - Worrying about professional career in future rate
1: "A little of the time", 2: "Some of the time", 3: "A good part of the time",
4: "Most of the time", 5: "All of the time"
- **Q26h** - Worrying about similar pandemic crisis in future rate
1: "A little of the time", 2: "Some of the time", 3: "A good part of the time",
4: "Most of the time", 5: "All of the time"
- **Q26i** - Worrying about leisure activities rate
1: "A little of the time", 2: "Some of the time", 3: "A good part of the time",
4: "Most of the time", 5: "All of the time"

III. Data cleaning and filtering

In this section, the selected column will be cleaned and filtered. In the first part, there are forty-five (45) Asian countries identified present in the questionnaire and the proponents agreed to use the first one hundred (100) responses per country with bachelor's degree as their current level of study.

Upon filtering, the countries that satisfied the criteria set by the proponents are the following:

- Afghanistan
- Bangladesh
- China
- Georgia
- India
- Indonesia
- Kuwait
- Kyrgyzstan
- Oman
- Pakistan
- Philippines
- Saudi Arabia
- Sri Lanka
- Thailand
- Turkey
- United Arab Emirates

The aforementioned columns to be used in the previous part contain NaN values or missing values except for the column of country (Q1) and level of study (Q5). The missing values were filled-out through the use of mode.

IV. Data to be analyzed, compared, and visualized

Based on the analyzation, the data in the following columns will be used for visualization:

- **Q6 and Q25**(a, b, c, d, e, f, g, h, i, and j)- rate of emotions felt based on the field of study
- **Q7 and Q25**(a, b, c, d, e, f, g, h, i, and j)- rate of emotions felt based on the age bracket (under 18, 18-20, 20-24, and over 24 years old)
- **Q8 and Q25**(a, b, c, d, e, f, g, h, i, and j)- rate of emotions felt based on the gender
- **Q17**- workload rate of students
- **Q20**- performance rate of students
- **Q23**- communication with other people rate (social life)
- **Q21**(c and i)- access rate on computer and good internet connection
- **Q22**(a and b)- rate about browsing online information and sharing digital content
- **Q24b**- person there for you if you felt down or depressed
- **Q25**(a, b, c, d, e, f, g, h, i, and j)- rate of emotions felt
- **Q26b**- personal mental health rate
- **Q26**(a, c, d, e, f, g, h, and i)- other contributors namely physical health, studying issues, future education, personal finances, professional career in future, pandemic crisis in future, leisure activities