Supplementary Material for PSAT

Anonymous

Example : CLEF eRISK ClinicalT5 PHQ-9 Over the last 2 weeks, how often have you Why do I experience sudden episodes of depression? I know been bothered by the following the title might not make sense, but let me explain. I took a break problems? from work to pursue a business idea I had, but unfortunately, it Little interest or pleasure in doing things didn't succeed. Now, at the age of 19, I'm about to re-enter the workforce. During this time, I often feel lost as if my family Feeling down, depressed, or hopeless and friends don't understand the dedication I've put into this Trouble falling asleep or sleeping too idea over the past 6 months at the cost of my health, developing much poor eating habits. Most of that time was spent alone in my Feeling tired or having little energy room working on business idea. I'm really tired of failure and difficulty having sleep. I am constantly overthinking on my Poor appetite or overeating confidence to get another real job. **PSAT** Feeling bad about yourself- or that you are a failure or have let yourself or family 6 PHQ-9-DO Concept: Depression (SNOMED CT ID: 255339005) down Why do I experience sudden episodes of depression? I know the PHQ-9-DO Concept : Poor Appetite title might not make sense, but let me explain. I took a break from Trouble concentrating on things, such as (SNOMED CT ID: reading the newspaper or watching work to pursue a business idea I had, but unfortunately, it didn't 64379006) television PHQ-9-DO Concept: Feeling hopeless (SNOMED CT ID: 307077003) PHQ-9-DO Concept : Emotionally Moving or speaking so slowly that other people could have noticed Or the workforce. During this time, I often feel lost as if my family and Deprived (SNOMED CT ID: 69328002) friends don't understand the dedication I've put into this idea over opposite-being so fidgety or restless that you have been moving around a lot more the past 6 months at the cost of my health, developing than usual poor eating habits PHQ-9-DO Concept: Feeling tired (SNOMED CT ID: 22496004) Thoughts that you would be better off dead, or of hurting yourself in some way king on busines<mark>s idea. I'm real</mark>ly tired of failure PHQ-9-DO Concept: and difficulty having sleep. I am constantly overthinking on my Trouble falling/staying Asleep (SNOMED CT ID: confidence it PHQ-9-PQ/Concept | Distress (SNOMED CT ID: 69328002) 59050008/67233009)

Example : CAMS

Over the last 2 weeks, how often have you PHQ-9 I feel like the only reason I haven't already found the courage to do it been bothered by the following problems? is my two younger siblings. I'm sixteen, and they are twelve and ten respectively. I know that my parents would be heartbroken, but that Little interest or pleasure in doing things would only be two people. My "friends" would be over it in a few weeks anyway. I feel like my brother and sister would be too Feeling down, depressed, or hopeless emotionally damaged or traumatised if I did it, and I don't want to cause any more pain to anyone anymore. Trouble falling asleep or sleeping too much 3 PHO-9 DO Concept: Feeling tired or having little energy Feeling emotionally hurt (SNOMED CT ID: PHQ-9 DO Concept: Feeling Poor appetite or overeating Irritable (SNOMED CT ID: 225019002) 55929007) Mapped to Q6. Feeling bad about yourself- or that you are SNOMED-CT feel like the only reason I haven't already found the courage to do it a failure or have let yourself or family down not found PHQ-9 DO Concept: Trouble concentrating on things, such as Emotionally reading the newspaper or watching would only be two people. My "friends" would be over it in a few disturbed (SNOMED television weeks anyway. I feel like my brother and sister would be too CT ID:309838005) ernotionally damaged or traumatised if I did it, and I don't want to Moving or speaking so slowly that other Mapped to cause any more pain to anyone anymore. people could have noticed Or the SNOMED-CT opposite-being so fidgety or restless that not found you have been moving around a lot more than usual Ground truth Explanation: emotionally damaged, Thoughts that you would be better off traumatised dead, or of hurting yourself in some way

ClinicalT5

PSAT

is my two younger siblings. I'm sixteen, and they are twelve and ten respectively. I know that my parents would be heartbroken, but that cams distinguishes itself from CLEF e-Risk by offering ground truth explanations. In the subsequent examples, we verify whether the highlighted words/phrases in ClinicalT5 and PSAT coincide with the ground truth explanations provided by CAMS.

Post

I feel like the only reason I haven't already found the courage to do it is my two younger siblings. I'm sixteen, and they are twelve and ten respectively. I know that my parents would be heartbroken, but that would only be two people. My "friends" would be over it in a few weeks anyway. I feel like my brother and sister would be too emotionally damaged or traumatised if I did it, and I don't want to cause any more pain to anyone anymore.

Generating explanations by prompting GPT 3.5 using ClinicalT5 extracted phrases.

I'm really sorry to hear that you're feeling this way, suicidal thoughts are serious, and it's crucial. Remember, your family care about you and want to help you through difficult times.

Generating explanations by prompting GPT 3.5 using PSAT extracted phrases.

The text describes the speaker carrying a heavy burden feeling that family is <u>feeling irritable</u>, <u>emotionally disturbed</u> and <u>hurt</u>. The speaker's action may cause more harm.

A Scenario where PSAT underperforms ClinicalT5 attention, but because of focused attention, the generated explanations were comparable.

Example : CAMS

PHQ-9	Over the last 2 weeks, how often have you been bothered by the following problems?	
1	Little interest or pleasure in doing things	
2	Feeling down, depressed, or hopeless	
3	Trouble falling asleep or sleeping too much	
4	Feeling tired or having little energy	
5	Poor appetite or overeating	
6	Feeling bad about yourself- or that you are a failure or have let yourself or family down	
7	Trouble concentrating on things, such as reading the newspaper or watching television	
8	Moving or speaking so slowly that other people could have noticed Or the opposite-being so fidgety or restless that you have been moving around a lot more than usual	
9	Thoughts that you would be better off dead, or of hurting yourself in some way	

Ground truth Explanation: take my own life, how selfish I am and how could I do this to my family, what could I have done to help,

ClinicalT5 If I take my own life, it's all going to be about how selfish I am and how could I do this to my family and what could I have done to help. But if a drunk driver takes me out, then no more guilt. All of a sudden I was taken too soon and how tragic my death is.

PHQ-9 DO Concept : Feeling helpless (SNOMED CT ID: 33300005) PHQ-9 DO Concept :

Mapped to Q6, SNOMED-CT not found

PHQ-9 DO Concept : Guilty Ideas (SNOMED CT ID:162321006)

If I take my own life, it's all going to be about how selfish I am and how could I do this to my family and what could I have done to help. But if a drunk driver takes me out, then no more guilt. All of a sudden I was taken too soon and how-tragic my death is.

These two phrases results in two snomed-ct concepts from PHQ-9-DO

PHQ-9 DO Concept: Immediately dangerous to life and health condition (SNOMED CT ID: 409544000)

suicide ideation

(SNOMED CT ID:

304712004)

PSAT

Post

If I take my own life, it's all going to be about how selfish I am and how could I do this to my family and what could I have done to help. But if a drunk driver takes me out, then no more guilt. All of a sudden I was taken too soon and how tragic my death is.

Generating explanations by prompting GPT 3.5 using ClinicalT5 extracted phrases.

The text talks about person who is willing to take life because of selfish behavior. The person feel bad about their family and feel helpless. The person is guilty and want to be taken away by drunk driver. This would be sudden and tragic death.

Generating explanations by prompting GPT 3.5 using PSAT extracted phrases.

The text shows the person is having <u>suicidal ideation</u> and <u>feeling helpless</u> to let the family down. The person has <u>guilty ideas</u> for having the <u>thought on suicidality</u>, which shows the <u>immediate danger to life</u> and the presence of a <u>health condition</u>.

Example: PRIMATE

PHQ-9	Over the last 2 weeks, how often have you been bothered by the following problems?	Ground Truth Answerability
1	Little interest or pleasure in doing things	Yes
2	Feeling down, depressed, or hopeless	Yes
3	Trouble falling asleep or sleeping too much	No
4	Feeling tired or having little energy	Yes
5	Poor appetite or overeating	No
6	Feeling bad about yourself- or that you are a failure or have let yourself or family down	Yes
7	Trouble concentrating on things, such as reading the newspaper or watching television	No
8	Moving or speaking so slowly that other people could have noticed Or the opposite-being so fidgety or restless that you have been moving around a lot more than usual	No
9	Thoughts that you would be better off dead, or of hurting yourself in some way	No

ClinicalT5

Admitting no bond with toddler and wondering if its justified or b/c Im just a terrible person. I know I love her but dont feel overwhelmed in love with 3 year old. In fact, i feel awkward hugging, I dont like her all over me and KNOW this should be so much deeper of a connection. My factors involved include me losing my first child, a son at 5 mos from a rare genetic condition. I also suffer from bipolar depression and constantly struggling. Is my depression and hatred for myself the reason Im not fully loving her..b/c i dont love ME? Is it b/c of the loss of my son and maybe deep down Im afraid and protecting myself. It could be Im just a cold jerk. Help only.

PSAT

Admitting no bond with toddler and wondering if its justified or b/c Im just a terrible person. I know I love her but dont feel overwhelmed in love with 3 year old. In fact, i feel awkward hugging, I dont like her all over me and KNOW this should be so much deeper of a connection. My factors involved include me losing my first child, a son at 5 mos from a rare genetic condition. I also suffer from bipolar depression and constantly struggling. Is my depression and hatred for myself the reason Im not fully loving her..b/c i dont love ME? Is it b/c of the loss of my son and maybe deep down Im afraid and protecting myself. It could be Im just a cold jerk. Help only.

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Generating explanations by prompting GPT 3.5 using ClinicalT5 extracted phrases.

This text is expressing a lack of connection with a toddler and questioning if it is due to depression, the loss of a son, fear of loss, or simply a lack of love for oneself. The text maps to concepts such as bond, year, son, feel, feel year old, love, toddler, fear, hug, gene, actor, net, child, depression, bipolar, reason, hatred, loss, and cold, which all relate to the speaker's struggle to feel a deeper connection with the toddler.

Generating explanations by prompting GPT 3.5 using PSAT extracted phrases.

The text maps to the concepts by examining how the main character feels and how their past experiences are affecting their current relationships. The <u>bonds they have with their toddler</u>, <u>the loss of life</u>, <u>their son</u>, their <u>depression</u> and <u>bipolar disorder</u>, and the <u>fear</u> and <u>hatred they feel towards themselves</u> all contribute to their <u>difficulty in loving their toddler</u>. The text also references the elderly year, son, feeling, and <u>hugging</u>, suggesting a lack of connection and understanding of love.

Answering PHQ-9 Questions using ClinicalT5's attention words and GPT 3.5

- 1. Yes (expressed by "dont feel overwhelmed in love with 3-year-old" and lack of deeper connection with the toddler)
- 2. Yes (mentioned "constantly struggling" and "hatred for myself")
- 3. Not explicitly mentioned in the text.
- 4. Not explicitly mentioned in the text.
- 5. Not explicitly mentioned in the text.
- 6. Yes (mentioned "hatred for myself")
- 7. Not explicitly mentioned in the text.
- 8. Not explicitly mentioned in the text, but the presence of bipolar depression suggests that fluctuations in energy and activity levels may occur.
- 9. Not explicitly mentioned in the text, but it is important to be aware that the person's struggles with depression and bipolar disorder could potentially lead to such thoughts.

Answering PHQ-9 Questions using PSAT's attention words and GPT 3.5

- 1. Yes Little interest or pleasure in doing things. (The person mentions not feeling overwhelmed in love with the toddler and feeling awkward hugging, indicating a lack of interest or pleasure in typical parental activities.)
- 2. Yes Feeling down, depressed, or hopeless. (The person mentions suffering from bipolar depression and constantly struggling, indicating feelings of depression.)
- 3. Yes Trouble falling asleep or sleeping too much. (Not explicitly mentioned in the text, but the person's struggles with depression could imply sleep disturbances.)
- 4. Yes Feeling tired or having little energy. (Not explicitly mentioned in the text, but depression can lead to feelings of fatigue and low energy.)
- 5. Yes Poor appetite or overeating. (Not explicitly mentioned in the text, but depression can affect appetite and eating habits.)
- 6. Yes Feeling bad about yourself or that you are a failure or have let yourself or family down. (The person mentions hatred for themselves and wonders if it's the reason they are not fully loving their toddler.)
- 7. Yes Trouble concentrating on things, such as reading the newspaper or watching television. (Not explicitly mentioned in the text, but depression can impact concentration and focus.)
- 8. Yes Moving or speaking so slowly that other people could have noticed, or the opposite-being so fidgety or restless that you have been moving around a lot more than usual. (Not explicitly mentioned in the text, but the person's bipolar depression could involve such symptoms.)
- 9. No Thoughts that you would be better off dead, or of hurting yourself in some way. (Not mentioned in the text.)