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UNIVERSITÀ EDITRICE

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E-ISSN 2724-2943
ISSN 2723-973X

Psychology Hub (2023)
XL, 3, 35-50

Article info

Submitted: 11 April 2023
Accepted: 22 October 2023
DOI: 10.13133/2724-2943/18055

Towards a Deeper Understanding of Self-diagnosis Among Female Saudi Psychology Students

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Abstract

Background: Numerous studies have addressed medical student syndrome among medical students, but only limited research has investigated this phenomenon among psychology students.

Objective: This current qualitative study aimed to investigate the phenomenon of self-diagnosis among female psychology students by exploring the underlying factors contributing to it and raising awareness of the potential harm that self-diagnosis may cause to female psychology students

Method: Semi-structured interviews were conducted with seven Saudi female psychology students.

Results: Interpretative Phenomenological Analysis (IPA) revealed that both internal and external factors cause the student to self-diagnose. The findings also confirmed the presence of negative and positive effects of self-diagnosis and the protective role that the academic level plays.

Conclusion: The phenomenon of psychology student syndrome is evident among students who self-diagnose.

Keywords: Health anxiety, Medical student syndrome, Psychology student syndrome, Self-diagnosis, Saudi Arabia

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Introduction

Medical student syndrome (MSS) is a phenomenon in which medical students believe they suffer from symptoms of the illness they are studying. It is considered a type of illness anxiety disorder formerly known as hypochondriasis (American Psychiatric Association, 2013). The phenomenon is common among medical students, and its implications on their well-being can be significant, as it can cause stress, anxiety, and depression in medical students. They may become overly concerned with their health (Ezmeirly & Farahat, 2019). Students with MSS may also struggle to maintain their academic performance, leading to further stress and anxiety (Al-Sowaygh, 2013). This phenomenon has attracted the attention of numerous researchers and scholars, a few of whom have referred to a similar phenomenon known as psychology student syndrome (PSS) in which psychology students believe they suffer from the mental disorder they are learning about (Deo & Lymburner, 2011). The impact of PSS on psychology students' well-being is less well-studied, but there is some evidence to suggest that it may have negative effects (Hardy and Calhoun, 1997; Ahmed and Samuel, 2017).

The results of studies that have investigated MSS are inconsistent, as early studies reported a high MSS prevalence of up to 78.8% (Woods et al., 1966) and 70% (Salkovskis & Howes, 1998), while more recent studies reported MSS prevalence of between 5-30% (Weck et al., 2014). MSS has also been examined in non-medical students such as law students (Kellner et al., 1986) and psychology students (Hardy & Calhoun, 1997). In terms of studies conducted in the Middle East, a Saudi study indicated that MSS rate among medical students reached 17.4% (Althagafi et al., 2019) and 16.11% (Thirunavukkarasu et al., 2019) while the rate decreased in other countries such as United Arab Emirates where it was recorded as 9.3% (Abdel Aziz et al., 2023), 11% in Iran (Eslami et al., 2018), and 11.9% in Pakistan (Zahid et al., 2016).

Medical Student Syndrome (MSS) is not a new topic. However, few studies have focused on this subject among psychology students. Therefore, this study examined the concept of PSS among psychology students in terms of the process of self-diagnosis in Saudi Arabia. Hardy and Calhoun (1997) suggested that psychology students tend to worry about their mental health more than other students do. By contrast, Deo and Lymburner (2011) noted no clear evidence of PSS among psychology students. A recent Vietnamese study revealed no clinically significant symptoms of MSS among psychology students; however, participants reported a medium level of MSS and health anxiety (Ngo-Thi et al., 2021). A few qualitative studies have examined self-diagnosis among psychology students. For instance, Ahmed and Samuel (2017) reported that both prior experience and clinical knowledge cause the student to self-diagnose. Regarding how psychology students self-diagnose, both intrinsic and extrinsic factors are implicated, and the process of self-diagnosis was seen to have both positive and negative effects on their lives. The results of a South African study revealed that students engaged in self-diagnosis and that most believed they either had GAD or MDD (Burger, 2020).

Medical Student Syndrome

Research indicates that MSS has two elements: cognitive and distress. The former comprises a student's thoughts and beliefs that they have the disease being studied, while the latter consists of anxiety and worry caused by the cognitive element (Moss-Morris & Petrie, 2001). Studies have reported higher rates of MSS among younger medical students as the emotional distress associated with self-diagnosis is more prevalent in the early years of medical school but decreases as clinical exposure increases (Hodges, 2004; Ezmeirly & Farahat, 2019; Sumathy et al., 2020). Hardy and Calhoun (1997) reported similar results for psychology students. These findings can be interpreted in several ways, as increasing medical and psychopathology knowledge may have contributed to a correct understanding of diseases and mental disorders and thus less worry about their health. It also can be related to the level of stress faced by younger students in general (Ezmeirly & Farahat, 2019).

The etiology of medical student syndrome is complex and multifaceted, involving both internal and external factors that may contribute to the onset of self-diagnoses. A study by Dyrbye and colleagues (2014) identified several factors, including personal life events, prior mental health history, and individual personality traits, as key contributors to medical students' development of depressive symptoms. Within the realm of personal life events, the model of interpersonal health anxiety accentuates that the emergence of health anxiety could be rooted in experiences of childhood trauma and adversities (Gehrt et al., 2022). Conversely, Cox et al. (2000) demonstrated that personality traits significantly influence cognitive processes and behavioral tendencies linked to psychological apprehensions concerning health. Cognitive distortions are negatively biased errors in thinking, and "all or nothing" thinking is one of the most famous, it refers to a way of viewing the world into categories of either "right or wrong" or "black or white" and this can be a harmful pattern because it does not necessarily reflect the complex reality (Burns, 1980). This was seen with people diagnosed with health anxiety (Salkovskis & Warwick, 1986). Furthermore, the concept of schematic thinking means organizing information based on common elements and categories. In the context of health anxiety, individuals may develop schemas related to health threats that lead them to view their symptoms or bodily sensations in a more negative light (Salkovskis & Warwick, 1986). This can reinforce their anxiety and lead to a cycle of negative thoughts and behaviors. Collectively, these diverse factors intricately contribute to the propensity for self-diagnosis.

Self-diagnosis

Self-diagnosis is a decision taken by an individual with pathological knowledge upon meeting the criteria (Pillay, 2010). Thus, it is a process that occurs without medical consultation. Individuals notice symptoms of illness within themselves and, accordingly, diagnose themselves with a particular disease or disorder (Ahmed & Samuel, 2017). This study focused on Saudi psychology students who diagnose themselves with mental disorders. By self-diagnosing, students are assuming that they

know their symptoms and the corresponding diagnosis. Mental disorders are extremely difficult to differentiate because of the overlapping symptomatology. Moreover, there is a possibility of missing a physical illness that manifests as a mental illness.

The phenomenon of Medical Student Syndrome (MSS) may be less studied in the Arab world compared to other regions for a variety of reasons. To begin with, medical education in the Arab world is relatively new compared to Western countries, and there may be a lack of awareness and knowledge about the potential negative consequences of medical education on students' mental health (Telmesani et al., 2011). Second, in some Arab communities, stigma related to mental health issues may make students less likely to seek help or speak openly about their symptoms (Dalky, & Gharaibeh, 2019). As a result, studying MSS is important, particularly among female Arab students since Arab societies tend to have strong cultural values surrounding health and illness. Women in these societies may face additional pressure to prioritize their health and may be more vulnerable to develop MSS as a result (Al-Sowygh, 2013). Investigating MSS among female Arab psychology students contributes to the existing body of knowledge on student mental health. It helps researchers and healthcare professionals gain insights into the prevalence, risk factors, and impact of MSS in this specific population. This knowledge can lead to improvements in prevention, diagnosis, and treatment strategies for MSS. To the best of the author's knowledge, no qualitative studies have been conducted on self-diagnosis and PSS among Saudi psychology students. Thus, the purpose of this study was to expand on the sparse literature on PSS, understand the causes of self-diagnosis, and raise awareness of the potential harm that self-diagnosis may cause to female psychology students. To achieve this, an Interpretative Phenomenological Analysis (IPA) (Smith & Osborn, 2003) was adopted, which is considered a qualitative approach that is concerned with understanding the lived experience of an individual and how they make sense of it. IPA involves a detailed analysis of individuals' personal accounts of their experiences, using a combination of interpretive and phenomenological approaches. Researchers use a variety of techniques to uncover the underlying meanings and themes in participants' accounts, including identifying patterns, analyzing the language used, and exploring the context of the experiences (Smith et al., 2003).

Method

This study utilized Interpretative Phenomenological Analysis (IPA) to explore the experiences of female Saudi students with PSS and self-diagnosis. To collect data, semi-structured interviews (in Appendix) were conducted with female Saudi students who self-reported experiencing symptoms of PSS and self-diagnosis.

Participants

The participants represent a reasonably homogeneous, purposive sample. They were recruited via a newsletter distributed by email

within the Department of Psychology, King Saud University. Seven individuals contacted the researcher by email expressing their interest and willingness to participate in the study. A letter that provided more details about the study was sent to those seven participants. The ages of the participants ranged from 19-22 (M age 20.3 years, SD 1.11). All were female, Saudi, and had self-diagnosed themselves. (n=4 from the 2nd year, n=3 from the 4th year) In line with usual practice in IPA, a homogeneous sample was sought therefore all were female, if males had been included, a significantly larger sample size would have been needed to establish gender differences. Since qualitative research focuses on the detailed analysis of each case, sample sizes tend to be small. Therefore, there is not necessarily a correct or specific number of participants in qualitative studies, as the sample size is normative for IPA (Brocki & Wearden, 2006). Informed consent was obtained from participants and their anonymity and confidentiality were assured. Ethical approval for the study was granted by The Humanities College Research (Research Ethics Committee) at King Saud University (Ref No: KSU-HE-22-327). Data were collected from April to June 2022.

Procedure

All participants took part in a confidential semi-structured interview which lasted between 45-60 min, as this is a flexible data collection tool that elicited in-depth insights into participants' experiences of self-diagnoses and enabled them to describe in detail how this experience had affected their lives. The interviews consisted of a range of open-ended questions which allowed further elaboration on the topic. The structure of the interview complied with a funnelling approach (Guba & Lincoln, 1981), which involves starting with a broad focus and gradually narrowing down to more specific research questions and analysis. Therefore, a general question regarding the participants' awareness of mental illness was asked at the beginning of the interview, with more specific questions following. The broad question "What is your definition of mental illness, and has your view changed after studying Psychology?" was asked to start the interview, which allowed participants to share their general understanding of mental illness and its relation to their academic experiences. The following questions focused on the participants' self-diagnostic experience and where appropriate, the interviewer asked participants to expand on relevant and interesting responses by providing more examples and details related to self-diagnose causes and their impact on their lives (Appendix 1). The data were collected through seven audio-recorded interviews and transcribed manually. The transcripts were then compared with the audio to identify and remove any human errors. All identifying information was removed from the transcripts to maintain confidentiality and privacy for our participants. Soft copies of recordings and transcriptions were stored in a secure password-protected computer. A colleague as a third party was asked to review the results of the study to ensure external validation of the findings and increase the rigor and trustworthiness of the study. The third party can serve as a critical reader, offering feedback on the accuracy and

coherence of the results. This can help identify any potential biases or errors in the analysis and interpretation of the data.

Data Analysis

The data were analysed using Interpretative Phenomenological Analysis IPA, which is a case-by-case analysis followed by comparison across cases. This analysis consists of four-stage (Smith & Osborn, 2003). Initially, the author read and re-read one transcript to become more familiar with the content as each additional reading tended to evoke a deeper understanding. Initial responses and notes that reflect the researcher’s interpretations were recorded on the left margin of the transcript and after re-reading again the transcript, themes were extracted and written on the right margin. This procedure was then repeated for each transcript. At this point, patterns were identified cross-case. Through analytical re-reading and constant comparison, the preliminary themes were modified and structured hierarchically. Three main themes emerged from the analysis: causes of self-diagnosis, the effect of self-diagnosis, and a protective factor against self-diagnosis.

The term validity in qualitative research is a controversial topic among researchers, as some prefer not to use it due to the paradigmatic differences between quantitative and qualitative research (Smith, 1983). It was proposed to replace the term validity with trustworthiness (Onwuegbuzie & Johnson, 2006) or rigor (Golafshani, 2003). Four criteria were proposed to be used as a guideline for trustworthiness: credibility, transferability, dependability, and confirmability (Lincoln and Guba, 1985). In this study, guidelines for ensuring rigor in qualitative research were followed (e.g., Mays & Pope, 2000; Smith, 2003). During the interview, the researcher summarized, reflected, and paraphrased what the participant said to ensure that she had an accurate understanding of the meaning. The member-checking interview was used as well, as participants were sent a copy of their interview transcript and key themes, and they were asked to evaluate the findings to ensure that the researcher’s interpretations were representative of their beliefs. In addition, an external peer was asked to review the results of

the study to determine if any gaps need to be addressed. Once the themes were finalized, the author discusses the results and supports her interpretations with quotes extracted from at least 3 participants to show the density of evidence for each theme (Smith, 2011).

Results

A wide range of data concerning the self-diagnosis of psychology students was revealed after analysing their transcripts. Three themes emerged which provided a new understanding of this phenomenon: causes of self-diagnoses, effects of self-diagnoses, and a protective factor against self-diagnoses (Table 1). The diagnoses made by the students are presented in table 2.

Tab. 2. Diagnoses made by the students.

Student	Diagnosis
W	Borderline personality
B	Eating disorder (Bulimia) - anxiety
E	Depression - Post-traumatic disorder
AH	Depression
R	Anxiety – Eating disorder (Bulimia)
N	Depression
A	Borderline personality

Theme one: Causes of self-diagnoses.

One of the main areas that the research aimed to focus on was knowing the reasons that drive a psychology student to self-diagnose which is divided into two sub-themes: Internal and external factors and each one of them is divided into more sub-themes. The internal factor consists of Prior life experience, which refers to a negative event that occurred early in their lives such as trauma, bullying, abuse, or even a tough childhood which might bring a maladaptive way of thinking once exposed to psychopathology. Some students had been exposed to harsh circumstances in their lives, for example:

Excerpt 1: *Student ‘AH’: ‘My father used to torture me.’*

Tab. 1. Themes and Sub-themes

Main Theme	Sub-theme	Sub-theme 1	Sub-theme 2
Causes of self-diagnoses	Internal Factors	Prior life experiences	Negative events (e.g. trauma, abuse, neglect during childhood. Etc)
		Existing/pre-existing disorders/symptoms	Feeling something is abnormal with oneself. (e.g., mood swings, binge eating, impulsivity. etc)
	External Factors	Student personality	Neuroticism (Anxiety and worry)
		Thought patterns.	Cognitive bias & Cognitive distortion
Effects of self-diagnoses	Positive effects	Family history of mental disorder	Relatives diagnosed with a mental disorder.
		Lecturer’s style and teaching skills	Direct style & Discussing style
	Negative effects	Cognitive	Awareness and understanding
		Affective	Empathy and relief
Protective Factor against self-diagnose	Academic level	Behavioural	Controlling the symptoms by applying cognitive and behavioural techniques
		Cognitive	State of confusion and uncertainty
		Affective	Self-perception of abnormality
		Behavioural	Emotional distress
		Self-diagnose is more common among younger students	Avoiding seeking medical consultation or asking for help

In this excerpt, student 'AH' employs a simple and direct sentence structure to convey a past experience. The phrase "My father used to torture me" presents the experience in a straightforward manner. The verb "used to" indicates a habitual action in the past, and "torture" conveys the severity of the experience. The pronoun "me" emphasizes the personal nature of the experience. The linguistic approach involves concise and explicit narration of a traumatic experience. The use of the past tense and the direct verb choice create a clear and impactful description.

Excerpt 2: *Student 'E': 'I had a harsh childhood trauma which I still suffer from its effects until now.'*

In this excerpt, student 'E' employs a compound sentence structure to describe a past traumatic experience and its ongoing effects. The phrase "I had a harsh childhood trauma" introduces the experience. The use of "had" emphasizes the possession of the experience, and "harsh" underscores the severity of the trauma. The phrase "which I still suffer from its effects until now" explains the lasting impact. The linguistic approach involves a sequential presentation of past experience and present consequences. The use of a compound sentence effectively connects the experience with its aftermath.

Excerpt 3: *student 'A': 'I don't want to deal with this issue... I'm not ready to deal with the past.'*

In this excerpt, student 'A' employs a declarative sentence structure to express reluctance and unreadiness to confront a past issue. The phrase "I don't want to deal with this issue" straightforwardly presents the unwillingness to address the matter. The use of "don't want" emphasizes the refusal. The phrase "I'm not ready to deal with the past" further elaborates on the reluctance. The use of "not ready" emphasizes the lack of preparedness. The mention of "the past" links the issue to a historical context. The linguistic approach involves a direct and unequivocal expression of emotional hesitation and unreadiness. The use of simple sentence structures reinforces the clarity of the statement.

Existing or pre-existing disorders/ symptoms refer to the feeling that there is something abnormal with the person even if the person does not know exactly what it is. Some students experienced psychological symptoms at a previous age and therefore tended to diagnose themselves retroactively, as the following examples indicate:

Excerpt 4: *Student 'B': 'I used to binge eat and then I prevented myself from eating completely for several days. I was stuck in this episode for years, focusing a lot on my eating. I didn't know back then what was wrong with me, but I know now that I had bulimia disorder.'*

In this excerpt, the narrative is structured in a chronological manner, detailing a pattern of behavior involving binge eating followed by self-imposed periods of fasting. The lexical choices convey the struggle and duration of this behaviour, describing it as an "episode" that persisted for years. The mention of focusing "a lot" on eating adds emphasis to the intensity of her preoccupation. The past tense ("used to," "was stuck") reflects the shift from the described behaviour to her current perspective. The contrast between not knowing "what was wrong" then and the present realization of having "bulimia disorder" exemplifies her journey of self-discovery.

Excerpt 5: *Student 'N': 'When I studied psychology, I knew that during the period of high school, I was suffering from depression.'*

In this instance, student 'N' directly associates her understanding of psychology with a past realization. The grammatical structure involves a chronological sequence, indicating that the realization occurred after studying psychology. The use of "knew" in conjunction with the past tense ("was suffering") illustrates the retrospective insight. The mention of a specific time period ("during the period of high school") adds context to her experience, framing it within a defined timeframe.

Others struggled with symptoms during their studies, for example,

Excerpt 6: *Student 'E': 'I studied depression, and I noticed that all diagnostic criteria for depression apply to me.'*

Student 'E' engages in a self-reflective narrative, incorporating the past tense "studied" to indicate a specific period of analysis. The use of "noticed" underscores her active awareness of the diagnostic criteria. The phrase "all diagnostic criteria for depression apply to me" exhibits a direct and assertive tone. The verb "apply" reflects a connection between the criteria and the speaker's personal experience. This excerpt displays a straightforward and analytical linguistic approach, focusing on alignment between her observations and established criteria.

Excerpt 7: *Student 'W': 'Since I was in high school, I used to behave strangely, and I don't know why! Suddenly I don't want to hang out with my friends anymore without any reason... lots of mood swings, I'm struggling with this until now.'*

Student 'W' constructs a narrative encompassing a prolonged time span, employing past tense ("used to behave", "don't want to hang out") to describe behavioural patterns. The mention of "high school" provides a contextual anchor. The use of ellipsis ("strangely... without any reason...") contributes to a fragmented and contemplative tone, suggesting the speaker's uncertainty and confusion. The present tense "I'm struggling" emphasizes the ongoing nature of her challenges. This excerpt employs a more emotive and introspective linguistic approach, conveying a sense of personal struggle and uncertainty.

One of the primary causes for self-diagnosis was personality traits, which play a key role regarding psychological concerns about health. Anxiety and worry were common among the seven students, as seen in the following examples:

Excerpt 8: *Student 'AH': 'I'm an anxious person who thinks a lot.'*

In this excerpt, student 'AH' presents a concise and direct self-description. The present tense "I'm an anxious person" conveys a stable trait, and the phrase "who thinks a lot" complements her self-identification by emphasizing her cognitive processes. The adjective "anxious" characterizes her personality, and the word "thinks" implies an active mental engagement. The linear structure of the sentence efficiently conveys her self-perception.

Excerpt 9: *Student 'B': 'Since I was a little, I had anxiety and fear from everything.'*

Student 'B' offers a retrospective narrative, using past tense ("was a little," "had anxiety") to describe her early experiences. The phrase "I had anxiety and fear from everything" employs parallel structure to emphasize the pervasive nature of her anxiety. This excerpt employs a linear and chronological structure to detail the duration and extent of her anxiety.

Excerpt 10: *Student 'N': "I get worried sometimes and I overthink to the extent that I can't sleep then I start saying to myself that I have anxiety ...mmm I remind myself it is only because I'm stressed Honestly, I get these thoughts a lot"*

Student 'N' offers a complex and introspective narrative. The initial phrase "I get worried sometimes" uses the present tense to describe a recurring behaviour. The subsequent description ("I overthink to the extent that I can't sleep") is structured as a cause-and-effect sequence. The ellipsis in "mmm" portrays a contemplative pause. The reflection "I remind myself it is only because I'm stressed" is framed as an internal dialogue, indicating self-awareness and cognitive processing. The phrase "Honestly, I get these thoughts a lot" employs the adverb "honestly" to convey sincerity and openness. This excerpt adopts a multifaceted structure that integrates introspection and internal dialogue.

Finally, the student's type of thinking, as it was noted from the collected information that there are some types of thinking among the students such as categorical, binary, and schematic thinking.

Excerpt 11: *Student 'N': "I am studying psychopathology with Dr. ..., and because she mainly deals with adults, I'm very nervous at her lecture because the possibility of what she is talking about applies to me, while I do not get so nervous with Dr.... because she focuses on mental illness in children, so I feel safe and secure because none of what she is talking about applies to me."*

In this excerpt, student 'N' employs a cause-and-effect structure. The initial phrase "I am studying psychopathology with Dr...." establishes context and introduces the central situation. The conjunction "because" introduces the causal relationship between the instructor's focus and her emotional response. The contrast between being "very nervous" and feeling "safe and secure" accentuates the emotional impact of the instructor's specialization. The repetitive use of "applies to me" underscores the personal connection to the material and it also indicate a schematic mode of thinking.

Excerpt 12: *Student 'AH': "Of course I was depressed. all criteria applied to me... Who am I lying to?"*

Student 'AH' engages in introspection and dialogue. The initial assertion "Of course I was depressed" demonstrates certainty and self-awareness. The phrase "all criteria applied to me" employs parallel structure to emphasize the alignment between her experiences and diagnostic criteria. It also shows a binary mode of thinking. The question "Who am I lying to?" functions as internal dialogue, reflecting doubt and self-questioning. This excerpt combines declarative statements with internal reflection, portraying a nuanced self-awareness.

Excerpt 13: *Student 'E': "I am a person who likes to put names for things and arrange things in specific categories. I studied my personal characteristics and found them to fall under the category of introversion."*

Student 'E' engages in self-description and reflection. The phrase "I am a person who likes to put names for things and arrange things in specific categories" establishes their affinity for categorization and order. The use of "likes" conveys personal preference. The sentence structure shifts to introduce a new topic, "I studied my personal characteristics," and follows with a purpose clause "and found them to fall under the category of introversion." The use of past tense "found"

indicates a retrospective assessment. This excerpt presents a dual structure—self-description and reflective analysis—providing insight into her cognitive processes.

On the other hand, there was the external factor which consists of a family history of mental disorder, where the presence of a family member with a mental disorder was found to be one of the causes that prompted psychology students to diagnose themselves.

Excerpt 14: *Student 'R' said: 'My uncle and my cousin are both diagnosed with bipolar disorder. I was always afraid that I would have bipolar disorder too, but after I studied the diseases well, I realised that genetics is not the only factor to develop the disease... My anxiety greatly decreased about developing bipolar disorder.'*

In this excerpt, Student 'R' employs a narrative structure with a clear sequence of thought progression. The initial sentence introduces a familial context, using past tense ("My uncle and my cousin were diagnosed") to establish the background. The phrase "I was always afraid" highlights the long-standing concern. The shift to present tense ("after I studied the diseases well") marks a point of change. The phrase "I realised that genetics is not the only factor to develop the disease" introduces a realization. The ellipsis serves as a transitional element, leading to the concluding sentence. The present tense ("My anxiety greatly decreased") emphasizes the current state resulting from the previous understanding. This excerpt offers a concise yet informative narrative of evolving comprehension and its emotional impact.

Excerpt 15: *Student 'B' stated: 'My aunt is diagnosed with schizophrenia. I always question myself if I'm schizophrenic like her...when I started studying schizophrenia, my worry decreased a lot as nothing from the diagnostic criteria apply to me.'*

Student 'B' employs a sequence of thoughts to express evolving perspectives. The initial statement, "My aunt is diagnosed with schizophrenia," establishes a family connection. The phrase "I always question myself" reflects ongoing self-doubt. The ellipsis serves as a pause, marking a change in focus. The shift in tenses ("when I started studying schizophrenia") indicates a chronological transition. The phrase "my worry decreased a lot" presents a clear emotional shift. The explanation "as nothing from the diagnostic criteria apply to me" highlights the specific reason for reduced concern. This excerpt presents a chronological progression, connecting personal experiences, introspection, and academic study.

Excerpt 16: *Student "N" said "At first, I was so afraid of getting bipolar disorder, especially since we have relatives suffering from it, but after I studied mental disorders, I knew that genetics factors are not enough to develop it...I was relieved"*

Student 'N' employs a clear narrative structure with an emphasis on cause-and-effect relationships. The initial phrase "At first, I was so afraid" introduces an emotional state. The phrase "especially since we have relatives suffering from it" adds context and explanation. The conjunction "but after I studied mental disorders" signifies a turning point. The phrase "I knew that genetics factors are not enough to develop it" introduces a realization based on academic study. The ellipsis creates a pause before the concluding phrase. The use of past tense ("I was relieved") emphasizes the emotional relief resulting from the new understanding. This excerpt employs a straightforward and coherent narrative structure.

Finally, the lecturer's style and teaching skills, which was also seen throughout the data as one of the causes to self-diagnose. The current findings revealed two main teaching styles: the direct style, where students gain information primarily by listening, and the discussing style which promotes learning through interaction. Both had an enormous influence on encouraging/preventing the student from self-diagnosing. Notably, however, the teaching style interacts differently with each student based on their personality, as some students indicated that the 'discussing style' helped them better understand psychological diseases and increased their awareness, which reduced self-diagnosis, while for other students this teaching style increased their anxiety to the extent that they started to diagnose themselves. This also applies to the 'direct style', as some students experienced increased anxiety and started to diagnose themselves, while others were not affected at all.

Excerpt 17: *Student 'E' said: 'Diagnostic criteria comes in the form of black or white. Either they apply to you or not. My previous lecturer used to give us the exact information presented in the book without any additional explanation. I diagnosed myself with depression based on her lecture. When I studied the same course with another lecturer who used a different style, she allowed discussions and provided more examples. She even said literally 'If you read the criteria in their rigid form, they will apply to all of us, so you have to pay attention to the details and context.' I knew then that I misdiagnosed myself.'*

In this excerpt, Student 'E' presents her personal experience with a clear narrative structure. The opening statement, "Diagnostic criteria comes in the form of black or white," introduces the main idea. The phrase "Either they apply to you or not" employs parallel structure, offering a concise summary of diagnostic criteria. The transition to "My previous lecturer" introduces a shift in focus. The past tense ("used to give," "diagnosed") establishes the time-frame and sequence. The phrase "based on her lecture" provides context for her self-diagnosis. The shift to "When I studied the same course with another lecturer" introduces a change in circumstances. The conjunction "who used a different style" signifies a contrast in teaching approaches. The use of "even said literally" draws attention to the lecturer's words. The quoted phrase "If you read the criteria in their rigid form, they will apply to all of us, so you have to pay attention to the details and context." highlights the lecturer's perspective. The past tense "I knew then that I misdiagnosed myself" reflects the realization after exposure to the new approach.

Conversely, Student 'AH' said that the direct style of teaching did not affect her at all; on the contrary, it was the 'discussing style' that made her diagnose herself:

Excerpt 18: *'She was talking about depression extensively which made me wonder if I was suffering from it or not, especially when she gave examples. There was a similarity between what she said and what I suffer from.'*

In this excerpt, the student offers a reflective and introspective narrative. The opening phrase "She was talking about depression extensively" introduces the context. The use of past continuous tense ("was talking") signifies an ongoing action in the past. The phrase "which made me wonder if I was suffering from it or not" employs parallel structure, connecting

her thoughts and contemplation. The conjunction "especially when" introduces a pivotal moment. The use of past continuous tense ("was giving") denotes another ongoing action in the past. The sentence "There was a similarity between what she said and what I suffer from" conveys a sense of recognition and comparison. The past tense "was" signifies the moment of recognition, while the phrase "what I suffer from" highlights her personal experience. This excerpt employs a sequence of actions and thoughts, unveiling her evolving introspection as they relate the instructor's content to her own experiences.

Student 'A' experience was remarkable, as she was affected by the two methods at the same time, she mentioned that she diagnosed herself with depression when it was explained briefly and without elaboration and discussions, and she realized that she misdiagnosed herself when it was explained to her again in a more detailed and informative way.

Excerpt 19: *"... She was explaining depression by its diagnostic criteria only... one, two, three. so, I said yah... based on this criterion I have depression, but when another professor explained it from a human perspective, I realised that I never experience mental exhaustion and depression in my whole life."*

This excerpt employs a concise and contrastive structure to emphasize a transformative realization. The initial ellipsis and repeated use of "She was explaining depression by its diagnostic criteria only... one, two, three" create a sense of monotony, mirroring a repetitive teaching method. The phrase "one, two, three" indicates a step-by-step presentation. This repetition through ellipsis conveys a robotic or formulaic approach. The phrase "so, I said yah..." introduces an informal tone, reflecting casual speech. The ellipsis creates a pause, hinting at a contemplative moment. The phrase "based on this criterion I have depression" presents a direct connection between the diagnostic criteria and the self-diagnosis, indicating a logical deduction. The conjunction "but when another professor explained it from a human perspective" signals a contrast in teaching methods and perspectives. The phrase "from a human perspective" highlights a more relatable approach, introducing empathy and understanding. The past tense "explained" and "realised" signifies the events' occurrence in the past. The concluding statement "I never experience mental exhaustion and depression in my whole life" underscores the contrast between the student's introspective understanding and her experience. The use of "never" emphasizes the absence of the described experiences.

At the same time, she mentioned that she diagnosed herself with borderline personality disorder when it was explained to her in detail and humanely, although it was previously explained to her briefly and without elaboration and it did not affect her. Her answer reflects a personal experience and describes a specific interaction where she gained insight into her own condition.

Excerpt 20: *"When she explained borderline personality disorder, she did not address it in terms of the diagnostic criteria but rather talked about the chaos inside the person. I had studied it previously, but I did not realize that it was me until that moment"*.

The introductory phrase "When she explained borderline personality disorder" establishes the context of the student's experience. The past tense "explained" signals an event that occurred in the past. The phrase "she did not address it in terms

of the diagnostic criteria” highlights the teaching approach, emphasizing what was not done. The contrastive phrase “but rather talked about the chaos inside the person” introduces the alternative approach. The use of “rather” signals the shift in perspective. The phrase “chaos inside the person” convey emotional and psychological turmoil. The use of “inside the person” emphasizes the internal nature of the experience. The following statement “I had studied it previously, but I did not realize that it was me until that moment” employs past perfect tense (“had studied”) to denote an action that took place before another past action. The phrase “I did not realize that it was me until that moment” signifies the transformative realization, portraying a shift in self-awareness. The phrase “until that moment” creates a climactic pause, emphasizing the pivotal nature of the realization.

Theme two: Effect of self-diagnosis

Individual differences were extremely clear when searching for the different effects of self-diagnosis. This is unsurprising in research that illustrates personal experiences which are affected by multiple factors. It is important to clarify that it is difficult to accurately distinguish between the positive and negative effect of self-diagnosis, and this is because the impacts of self-diagnosis can be multifaceted, influenced by various factors such as individual coping mechanisms, personal perceptions, and the nature of the mental health condition. It is also important to consider the contextual factors that contribute to the outcomes of self-diagnosis. These factors could include the students’ prior experiences, cultural backgrounds, and access to resources for seeking professional help. In addition, it is clear from the quotes that follow that the effects of self-diagnosis are not purely positive or negative as some students might experience both benefits and challenges simultaneously. For instance, self-diagnosis might lead to increased awareness of mental health issues while also creating confusion due to the lack of professional guidance. Moreover, binary framing might not capture the full depth of the psychological and emotional responses of the participants, however for the research purpose in this study self-diagnosis effects were broadly divided into two categories, positive and negative, which were also divided into sub-categories: cognitive, affective, and behavioural. In terms of the cognitive effect, on the positive side, there was an increase in awareness and understanding as many students reported that they understood that their abnormal behaviour had a specific name and could be treated, as evidenced in the following statements:

Excerpt 21: *Student ‘B’*: “When I understood and realized that I had an eating disorder, I accepted myself more”.

In this excerpt, Student ‘B’ employs a concise structure to convey a transformation in self-perception. The opening phrase “When I understood and realized that I had an eating disorder” introduces the moment of realization. The use of past tense (“understood” and “realized”) signals actions that occurred in the past. The phrase “I accepted myself more” signifies the resulting emotional shift. The conjunction “When” indicates a cause-and-effect relationship between understanding and self-acceptance.

Excerpt 22: *Student ‘AH’*: “Now I know that I have a problem and it can be solved. I am not a toxic and harmful person.... This can be cured”.

This excerpt uses a straightforward and optimistic structure to convey a change in self-perception. The opening phrase “Now I know that I have a problem and it can be solved” introduces a realization followed by a solution. The repetition of “I” emphasizes the speaker’s personal experience. The conjunction “and” signifies a continuation of thought. The phrase “I am not a toxic and harmful person” contrasts the previous self-perception with a more positive view. The ellipsis creates a pause, leading to the concluding statement “This can be cured,” which emphasizes optimism and hope.

On the negative side, self-diagnoses created a state of confusion and uncertainty, as some students were confused about whether they had the disorder or not. The following statements illustrate this:

Excerpt 23: *Student ‘W’*: ‘...But I don’t feel that my diagnosis is 100% correct, it could be wrong.’

In this excerpt, Student ‘W’ employs a hesitant and reflective structure to express uncertainty. The phrase “But I don’t feel that my diagnosis is 100% correct” highlights the doubt surrounding the self-diagnosis. The use of “feel” emphasizes an emotional perspective rather than a definitive conclusion. The phrase “it could be wrong” introduces the possibility of an inaccurate diagnosis. The use of “could be” and “wrong” emphasizes the uncertainty.

Excerpt 24: *Student ‘B’*: ‘I do not know if I had bulimia nervosa or just some of its symptoms.’

This excerpt employs a straightforward structure to convey a lack of clarity. The introductory phrase “I do not know” establishes the uncertainty. The conjunction “if” signals the introduction of different possibilities. The phrase “I had bulimia nervosa or just some of its symptoms” presents two contrasting options. The use of “or” introduces an alternative possibility. The phrasing “just some of its symptoms” implies a partial overlap, suggesting that the speaker is unsure of the extent of her experiences.

Another cognitive effect of self-diagnosis is the self-perception of abnormality. This refers to the student’s perception that she is abnormal and starts worrying about it, as evidenced in the following statements:

Excerpt 25: *Student ‘AH’*: “When I diagnosed myself with depression. I told myself.... You are sick and weak ...you are not normal.”

This excerpt utilizes a reflective and introspective structure to capture the internal dialogue. The introductory phrase “When I diagnosed myself with depression” sets the context for the introspection. The repetition of “myself” underscores the personal nature of this process. The phrase “I told myself” introduces the internal monologue. The ellipsis (...) indicates a pause or hesitation, emphasizing a moment of thought and it also implies that the internal dialogue extends beyond what’s provided in the excerpt.

The phrases “You are sick and weak ...you are not normal” portray the self-criticism and internal conflict. The repetition of “you are” emphasizes the accusatory tone. The use of “sick” and “weak” suggests negative self-perceptions. The contrast

between “not normal” and societal norms highlights the perceived deviation from the norm

Excerpt 26: *Student ‘A’: “The moment of realizing that I had borderline personality disorder was a shocking moment, I began to recall all my previous abnormal behaviours.”*

This excerpt employs a narrative structure to describe a significant moment of realization. The introductory phrase “The moment of realizing that I had borderline personality disorder” introduces the focal point of the narrative. The use of “realizing” conveys a transformative experience. The phrase “was a shocking moment” underscores the emotional impact. The phrase “I began to recall all my previous abnormal behaviours” signifies a reflective process triggered by the realization.

Its effect on focus and attention was observed through the responses of one of the students, her academic performance was affected dramatically to the extent that she dropped the course.

Excerpt 27: *Student ‘E’ stated: ‘My self-diagnosis of depression has affected me considerably, and I no longer focus on my studies or even attend my lectures to the point that I withdrew from the course. I was thinking a lot about my illness’.*

Another important cognitive effect occurred when individuals started to act out the symptoms, they think they are experiencing. For example, one student (E) diagnosed herself with depression, she matched the symptoms she had (due to a different cause) with selective symptoms of depression, put them in the context of the disorder, and acted accordingly. She said:

Excerpt 28: *‘I’m a person who loves to communicate face-to-face with others, so when quarantine was imposed on us, I felt sad and worried which affected my mood and sleep. At that time, I was studying depression, I started to select and match the criteria with me and started to act according to this diagnosis. I realise now that my behaviour was not logical at all; I was not depressed, but I was considerably affected by my diagnosis.’*

Regarding affective effects, it was clear that some students experienced unpleasant emotions such as anxiety and worry due to self-diagnosis.

Excerpt 29: *Student ‘AH’ said: “When I diagnosed myself, I was very upset because I am a person with high pride, I did not want to admit that I have depression”*

This excerpt employs a chronological and introspective structure to portray the emotional impact of self-diagnosis. The opening phrase “When I diagnosed myself” sets the context for the emotional response. The past tense “was very upset” signals the emotional state at the time of self-diagnosis. The phrase “because I am a person with high pride” introduces the reason for her upset feelings. The phrase “I did not want to admit that I have depression” signifies a resistance to acknowledging the condition.

Excerpt 30: *Student ‘A’ said: “I diagnosed myself with borderline personality disorder while I was in the lecture. I was shocked and felt panic. I immediately left the lecture.”*

This excerpt employs a narrative structure to convey a sequence of events and emotions. The introductory phrase “I diagnosed myself with borderline personality disorder” introduces the act of self-diagnosis. The phrase “while I was in the lecture” establishes the setting and temporal context. The phrase “I was shocked and felt panic” portrays the emotional

response. The use of “was” indicates the emotional state during the self-diagnosis. The phrase “I immediately left the lecture” portrays the immediate action taken in response to the emotional reaction. The use of “immediately” emphasizes the swift response. The linguistic approach involves a combination of cause-and-effect, introspection, and narrative reflection. The use of different structures serves to convey the diverse emotional experiences and actions taken. The repetition of personal pronouns (“I,” “myself”) emphasizes the personal nature of the experiences.

On the other hand, there was a great sense of relief and empathy for oneself after understanding what they were going through.

Excerpt 31: *Student ‘B’: ‘I was blaming myself and wondering, “Why don’t I eat like normal people?”, but when I realised what I was suffering from was an eating disorder, I felt so relieved.’*

This excerpt employs a chronological and emotional progression to convey a transformative realization. The phrase “I was blaming myself and wondering” introduces the initial state of self-blame and confusion. The quotation “Why don’t I eat like normal people?” signifies internal dialogue and self-questioning. The conjunction “but” introduces a contrast between the initial state and the subsequent realization. The phrase “when I realised what I was suffering from was an eating disorder” indicates the transformative moment of clarity. The phrase “I felt so relieved” portrays the emotional response to the realization. The use of “so” intensifies the emotional impact. The linguistic approach involves a progression from a state of confusion to a state of relief. The use of quotations captures internal dialogue and introspection.

Excerpt 32: *Student ‘AH’ said, “Now I know that I have a problem and it can be solved. I am not a toxic and harmful person.... This can be cured”.*

This excerpt employs a straightforward and affirmative structure to convey a shift in perspective. The opening phrase “Now I know that I have a problem and it can be solved” introduces a realization followed by a positive outlook. The repetition of “I” emphasizes the personal nature of the realization. The phrase “I am not a toxic and harmful person” contrasts the previous negative self-perception with a more positive view. The ellipsis creates a pause, leading to the concluding statement “This can be cured,” which emphasizes optimism and hope.

From behavioural effects point of view, most students did not ask for help, nor did they seek medical consultation after self-diagnosing; instead, they tried to deal with this diagnosis by themselves for different reasons such as the diagnosis was retroactively applied to a previous stage in their lives.

Excerpt 33: *Student ‘B’: “I used to binge eat when I was in high school”.*

In this excerpt, Student ‘B’ employs a simple past tense structure to recount a behaviour from the past. The phrase “I used to binge eat” highlights the repetitive nature of the behaviour during a specific time frame. The phrase “when I was in high school” specifies the period of the behaviour. The linguistic approach here involves straightforward narration of a past behaviour with a focus on the time frame in which it occurred.

Excerpt 34: *Student ‘R’: “I realized that when I was in intermediate school, I had bulimia nervosa”.*

This excerpt employs a retrospective structure with ellipsis to present a realization about a past condition. The ellipsis at the beginning of the sentence implies the continuation of a thought or conversation. The phrase “I realized that when I was in intermediate school” introduces the time frame of the realization. The past tense “had bulimia nervosa” highlights a past condition. The linguistic approach involves presenting a realization that links a specific past period with a mental health condition.

Others avoided talking about their self-diagnosis with their families because they did not want to cause them any worry or elicit feelings of guilt, as student ‘N’ said:

Excerpt 35: *“Even after I knew that I had depression, I did not tell my mother because I was afraid that she would blame herself for not understanding what I was going through at that point of my life.”*

In this excerpt, student ‘N’ employs a cause-and-effect structure to convey her decision not to share her diagnosis with her mother. The phrase “Even after I knew that I had depression” establishes the context of the knowledge of the diagnosis. The conjunction “even after” implies that despite having this knowledge, the action taken was different from what might be expected. The phrase “I did not tell my mother” introduces the action of not sharing the diagnosis. The conjunction “because” connects this action to the forthcoming reason. The phrase “I was afraid that she would blame herself for not understanding what I was going through at that point of my life” provides the reason for the decision. The use of “afraid” indicates the emotional state driving the decision. The phrase “she would blame herself” signifies the potential consequence that student ‘N’ wants to avoid.

While others avoided sharing it with their families as they did not want to be pressured to solve this problem, as student ‘W’ explained:

Excerpt 36: *“I did not want anyone to know about it. They will make me feel that I have a problem and I must solve it quickly. I want to solve this problem by myself.”*

In this excerpt, Student ‘W’ employs a series of declarative statements to convey her perspective on addressing a personal issue. The phrase “I did not want anyone to know about it” establishes the initial desire for privacy and secrecy. The use of “did not want” indicates the absence of the desire to share the information. The phrase “They will make me feel that I have a problem” introduces an anticipated response from others. The phrase “and I must solve it quickly” adds the perceived expectation that others may place on her. The linguistic approach here involves conveying anticipated external pressures and expectations. The next phrase “I want to solve this problem by myself” asserts student ‘W’s preference for addressing the issue independently. The use of “want” indicates a personal desire. The phrase “by myself” emphasizes the individual nature of her approach.

Only one student AH, asked for medical help after she diagnosed herself with depression:

Excerpt 37: *“I went to the clinic and the doctor diagnosed me with depression (as I diagnosed myself) and gave me medication. After around two weeks I was shocked that I was feeling differently ...it was very easy to handle this issue with medication.... I didn’t need all this catastrophic thinking ... I felt real relief after the medication.”*

The use of the word “shocked” emphasizes the positive impact of medical treatment on her mental state. The narrative structure highlights a journey from self-diagnosis to medical intervention, with a good sense of relief. However, this effect cannot be generalised to the other students, as most thought their ability to self-diagnose qualified them to deal with the disease by applying what they have learned from cognitive and behavioural techniques.

Excerpt 38: Student ‘R’: *“When my thoughts start bothering me and my anxiety rises, I try to distract myself by arranging my room or doing meditation. I find ways to control my thoughts”.*

In this excerpt, Student ‘R’ employs a conditional structure to describe a coping strategy. The phrase “When my thoughts start bothering me and my anxiety rises” sets the condition for the subsequent actions. The use of “start bothering” indicates the initiation of the condition. The conjunction “and” links the two conditions of troubling thoughts and rising anxiety. The phrase “I try to distract myself by arranging my room or doing meditation” presents the coping mechanisms employed. The use of “try” indicates the attempt at implementing these strategies. The verbs “arranging” and “doing” introduce the specific actions of distraction. The variety of actions emphasizes the flexibility of the coping approach. The final sentence “I find ways to control my thoughts” emphasizes the goal of the coping strategies. The use of “find ways” underscores the active search for effective methods.

Excerpt 39: Student ‘A’: *“When I knew that I have a borderline personality I tried to control my impulsivity with others, I forced myself to take a step back and think before engaging in a heated discussion”.*

This excerpt employs a temporal structure to describe actions taken after a specific point in time. The phrase “When I knew that I have a borderline personality” establishes the temporal reference. The verb “knew” indicates the past moment of awareness. The phrase “I tried to control my impulsivity with others” introduces the action of attempting control. The use of “tried” indicates the effort made. The phrase “I forced myself to take a step back and think before engaging in a heated discussion” specifies the action taken to address impulsivity. The use of “forced myself” emphasizes the active effort. The sequential process of “taking a step back” and “thinking before engaging” highlights a deliberate approach to managing impulsivity.

Theme three: Protective Factor against self-diagnoses

This research indicated that self-diagnosis would decrease as psychology students receive information about mental illnesses, in other words, self-diagnosis is more common among students in the initial years as the following examples illustrate:

Excerpt 40: Student ‘W’ stated: *“The more information I know, the less self-diagnosis I do”*

In this excerpt, student ‘W’ employs a cause-and-effect structure to describe the relationship between acquiring information and engaging in self-diagnosis. The phrase “The more information I know” establishes the causal factor, indicating that the acquisition of knowledge is the cause. The use of “more” highlights the incremental accumulation of information. The phrase “the less self-diagnosis I do” introduces the effect, emphasizing the decrease in self-diagnosis. The use of “less” indicates a reduction in frequency. The linguistic

approach involves presenting a causal relationship through the “the more... the less” structure, which effectively highlights the inverse relationship between knowledge and self-diagnosis.

Excerpt 41: *Student ‘R’ commented: “The more I know about pathology the better I understand it and the less I worry about my psychological health.”*

This excerpt employs a similar cause-and-effect structure to convey the impact of knowledge on understanding and worry. The phrase “The more I know about pathology” serves as the initial causal factor, indicating that the acquisition of knowledge about psychological health is the cause. The conjunction “the better” introduces the first effect, which is an improvement in understanding. The phrase “I understand it” underscores the improved comprehension resulting from increased knowledge. The conjunction “and” introduces the second effect, which is a decrease in worry. The phrase “the less I worry about my psychological health” presents the diminished concern. The use of “less” indicates a reduction. The linguistic approach involves detailing the impact of knowledge acquisition on both understanding and emotional state. The use of “the more... the better” structure highlights the positive correlation between knowledge and understanding, as well as the negative correlation between knowledge and worry.

Excerpt 42: *Student ‘B’: “The better I understood about diseases, the less anxious I became about them”.*

This excerpt follows a similar cause-and-effect structure as the previous examples. The phrase “The better I understood about diseases” serves as the cause, indicating that improved understanding of diseases is the causal factor. The conjunction “the less” introduces the effect, which is a reduction in anxiety. The phrase “less anxious I became about them” conveys the diminished emotional response. The use of “less” indicates a decrease. The linguistic approach involves presenting a causal relationship between understanding and anxiety reduction. The “the better... the less” structure underscores the inverse relationship between understanding and anxiety.

Discussion

The genesis of Medical Student Syndrome (MSS) and Psychology Student Syndrome (PSS) is characterized by intricate and multifaceted origins, involving a confluence of internal and external determinants that potentially contribute to the emergence of self-diagnostic tendencies. Our research findings delineate four internal factors: Prior life experiences, existing/pre-existing disorders/symptoms, student personality and thought patterns. This observation aligns with the conclusions drawn by Dyrbye et al. (2014). Moreover, the findings revealed external factors, namely, family history of mental disorders and lecturer’s style and teaching skills.

Extensive investigation has been devoted to exploring the connections between trauma exposure and conditions such as somatization, depression, and anxiety (Do et al., 2019; McCall-Hosenfeld et al., 2014). The interpersonal model of health anxiety underscores the potential role of childhood trauma and adverse experiences in the development of health-related anxieties (Gehrt et al., 2022), which lends support to one of

our findings—prior life experiences. This term encapsulates negative incidents occurring early in participants’ lives, encompassing occurrences like trauma, or bullying. However, it is imperative to acknowledge the intricate and interdependent nature of the relationships between these factors. For instance, traumatic experiences can profoundly influence cognitive processes, including the occurrence of cognitive errors (Center for Substance Abuse Treatment, 2014). Consequently, this influence might contribute to the cultivation of maladaptive cognitive frameworks as students encounter concepts related to psychopathology.

One of the main findings in our study is that individuals who have encountered mental disorders or exhibited symptoms thereof, whether contemporaneously or in the past, are more inclined to engage in self-diagnostic tendencies. This assertion is underpinned by the notion that a history of existing or pre-existing mental disorders/symptoms can contribute to an enhanced readiness to self-identify with perceived psychological conditions. One study identified that prior mental health history may be a contributor to the development of depressive symptoms among medical students. This supports the concept that a history of mental health issues can influence individuals’ psychological experiences (Dyrbye et al., 2014). Within the context of psychology students, this factor holds potential significance as a determinant of self-diagnostic behaviours.

In term of our third internal factor, which is student personality, our study’s findings substantiated the prevalence of anxiety and worry across the study sample. This observation is consistent with prior research, which has consistently established a correlation between health anxiety and the trait of neuroticism (Deo & Lymburner, 2011; Costa & McCrae, 1987). The cognitive facets of neuroticism, including both worrisome thoughts and ruminative tendencies, emerge as potential mediators within the context of the relationship between neuroticism and somatic complaints, as elucidated by Denovan et al. (2019).

Regarding the final internal factor, namely thought patterns, our study findings unveiled distinct cognitive patterns exhibited within the sampled participants. These patterns encompass categorical, binary, and schematic modes of thinking. This concurs with existing scholarly literature, which underscores the pivotal role of cognitive biases in shaping the genesis and perpetuation of health anxiety (Salkovkis & Warwick, 1986). Notably, a particularly pertinent cognitive bias is the attentional bias directed towards health-threat stimuli. This inclination can result in an amplified focus on potential health issues, often at the expense of other environmental facets (Shi et al., 2022). The resulting heightened attention to health threats has the potential to exacerbate anxiety and establish a self-perpetuating cycle of escalating health-related apprehension.

Conversely, a set of external factors was identified, such as, the family history of mental disorders. The outcomes of this study unveiled the presence of relatives with mental disorders to the participants of the study sample. Drawing from prior investigations in this domain, it is noteworthy that a study brought to light the fact that 62% of the participants acknowledged that residing with an individual afflicted by a mental disorder led to feelings of concern, anxiety, or distress (Pearson, 2015). Additionally, extant literature substantiates

that proximity to individuals grappling with mental disturbances may constitute a catalyst for the emergence of health anxiety (Rachman, 2012). The present study's findings indicate a noteworthy reduction in the apprehension of developing the same disorder, concomitant with an augmentation of pertinent scientific knowledge. However, individuals might remain susceptible to heightened anxiety when exposed to information pertaining to other mental disorders. Furthermore, it's worth noting that psychologists often have a personal history of family mental health problems. This aspect of personal experience is not only a risk factor in terms of anxiety, as previously discussed, but it can also serve as a potential impetus for their choice of a career in psychology, involving a complex psychological elaboration (Murphy & Holgin, 1995; Elliott & Guy, 1993).

The last factor revealed by this study is the lecturer's style and teaching skills. Social interactions, communication and guidance are key requirements for learning (Ullah et al., 2018). Clarà (2017) asserted that social interaction is an essential contributor to cognitive development as individuals learn through observing and understanding others; therefore, students learn to understand the world based on knowledge gained through interactions with lecturers and peers. Accordingly, lecturers play a significant role in shaping psychology students' understanding of the psychological world. This is extremely important because new content and knowledge can influence their thinking, and some students want to utilise this. In the case of psychopathology, students can take this exciting new knowledge of mental disorders further by applying it to themselves. The results of this study showed that different teaching styles may interact differently with each student's personality, and therefore impact their tendency to self-diagnose. To the best of the author's knowledge, no specific studies investigated this exact phenomenon. However, some studies suggested that different teaching styles can have different effects on student's academic and psychological outcomes. For example, some studies have found that interactive or discussion-based teaching styles are associated with improved academic performance and increased student engagement compared to traditional lecture-style teaching (Freeman et al., 2014; Prince, 2004). Other studies have suggested that lecture-based teaching can be effective for certain types of learning objectives or for students who are highly motivated and independent learners (Kember et al., 2004). Overall, more research is needed to fully understand how different teaching styles interact with each student's personality and impact their tendency to self-diagnose.

In the second theme, the effects of self-diagnosis are multifaceted and influenced by individual and contextual factors. Our study categorized these effects as positive and negative, simplifying a complex phenomenon for clarity. However, it's essential to acknowledge that self-diagnosis's true nature is intricate and multifaceted, extending beyond these categories.

Regarding cognitive effects, our findings align with previous research, showing both positive outcomes like increased awareness and comprehension (Arellano Carmona et al., 2022) and negative outcomes such as confusion and inability to focus (Ahmed & Samuel, 2017).

In terms of affective effects, our study concurs with Ahmed & Samuel (2017), finding both positive and negative effects. On one hand, a deepened comprehension of one's symptoms can foster heightened self-empathy. Conversely, this augmented awareness can concurrently precipitate emotional distress.

Our research also highlighted two primary behavioural responses: seeking and avoiding medical help. Most students in our study preferred to avoid seeking medical help due to reasons like potential stigma or a preference for self-management using learned cognitive and behavioural techniques. Only one student sought medical help, consistent with Ahmed & Samuel's (2017) findings, which suggest seeking clinical diagnosis as a positive behavioural effect.

Furthermore, our study indicates that self-diagnosis tends to decrease as psychology students receive information about mental illnesses. This aligns with previous studies (Ahmed & Samuel, 2017; Hardy & Calhoun, 1997). However, it contrasts with the findings of Ngo-Thi (2021), which revealed that the more clinical courses students participated in, the more distressed they became about their mental health. When comparing our findings about academic level with those of medical students, we observe similar patterns, as most studies revealed a higher percentage of students with MSS in the initial years, followed by a decline as students' progress in their education (Al-Faris et al., 2012; Hashmi et al., 2014; Fares et al., 2016; Moss-Morris & Petrie, 2001; Zahid et al., 2016).

In summary, this investigation delves into the etiological underpinnings of Psychology Student Syndrome (PSS), focusing on factors within and outside the students. Furthermore, the study sheds light on the nuanced repercussions of self-diagnosis within the student cohort, encompassing cognitive, affective, and behavioural dimensions. Notably, the results show that as psychology students learn more about mental health, they tend to self-diagnose less.

Conclusion and Practical Implications

In PSS, psychology students believe they suffer from the mental disorder they are learning about. It was examined in the current study in terms of self-diagnosis. Our results provide a deep understanding of the internal (prior life experience, existing or pre-existing disorders/ symptoms, student personality and thoughts patterns) and external factors (family history of mental disorder and the lecturer's style and teaching skills) that influence self-diagnoses which were seen to have both positive and negative effects on students (cognitively, affectively and behaviourally), and the academic level proved to be a protective cushion against its distressing effects. The result of the study suggests several practical implications for example, the importance of using a teaching style that goes beyond simply presenting diagnostic criteria and includes a more human approach that provides context, examples, and opportunities for discussion.

Psychology lecturers can incorporate discussions on self-diagnosis into their curriculum, emphasizing the risks and benefits of self-diagnosis, and encouraging students to seek professional help when necessary. In terms of students, they can be trained on how to properly interpret and apply diagnostic

criteria, as well as the importance of seeking professional help when necessary. Raising awareness of the potential negative consequences of self-diagnosis, such as increased anxiety and hypervigilance, can help students make informed decisions about their mental health and avoid unnecessary stress. Overall, the study provides a valuable contribution to the literature on self-diagnosis among psychology students. However, further research is needed to deepen our understanding of this phenomenon and its effects on students in different contexts.

Strengths and Limitations

One of the main strengths of this study was the use of in-depth interviews to explore factors influencing self-diagnoses and to confirm the existence of self-diagnoses among female psychology students. This approach allowed for a deeper exploration of the participants' experiences and perspectives on self-diagnosis. The interviews allowed the participants to express their thoughts and feelings in a more detailed way than would have been possible through quantitative research alone. This, in turn, provided a rich understanding of the factors that influence self-diagnosis among our sample. However, one of the limitations of the study is the small and homogeneous sample. This means that the results of the study cannot be generalized to other populations or contexts beyond the sample studied. Future studies with larger and more diverse samples may provide a more comprehensive understanding of the extent to which self-diagnosis affects psychology students in different contexts.

Acknowledgements

The author would like to thank the participants in this study.

Author Contributions

Conception and design of the study, implementation and data collections, analysis and interpretation of the data and writing whole manuscript.

Conflict of interest

The author declares no conflict of interest.

Funding

The author received no financial support for the research, authorship, and/or publication of this article.

Ethical approval

Ethical approval for the study was granted by The Humanities College Research (Research Ethics Committee) at King Saud University (Ref No: KSU-HE-22-327).

Data availability statement

The datasets generated during and/or analyzed during the current study are available from the corresponding author on reasonable request

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Appendix 1

Semi-Interview

The interview questions	
1.	What is your definition of mental illness, and has your view changed after studying Psychology?"
2.	Tell me about your experience with self-diagnosing. When did you notice that you started diagnosing yourself? And what are the mental illnesses that you diagnosed yourself with?
3.	How did you feel about it when you diagnosed yourself?
4.	What did you do after you diagnosed yourself?
5.	What are the reasons, in your opinion, that prompted you to self-diagnose?
6.	How did self-diagnosis affect your life?
7.	Have you consulted or shared this diagnosis with anyone? And why?
8.	Have you noticed any change in your self-diagnose rate as you move to a higher academic level? And why do you think this happened?
9.	Do you regret studying psychology because of the self-diagnosis it caused you?
10.	Do you fear continuing to be a psychologist in the future because of self-diagnosis?

