



Patterns of the shared symptoms of anxiety among medical students in Saudi Arabia

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General Note



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ABSTRACT

Objective: the objective of this study was to assess the patterns of shared symptoms of anxiety among medical students in Saudi Arabia. *Methodology:* This is a cross-sectional study enrolled in 316 Saudi medical students in the faculty of medicine, University of Hail, Northern Saudi Arabia. All participants were selected randomly regardless of level, age, and sex. All medical students in basic years (years 1, 2, and 3) as well as (years 4 and 5) phases of the academic year 2019–2020 were administered the questionnaire. The inclusion of the subjects was voluntary. *Results:* The symptoms of anxiety were found to be prevalent in 30.4% of the medical students. Regarding gender, the present study showed a higher prevalence rate of anxiety symptoms in female medical students (47.1%) than males (25%). For anxiety status, the prevalence of each category was 69.6% (no anxiety), 17.6% (mild anxiety), and

12.8% (moderate anxiety). The most distributed symptoms of anxiety were fear worst which is found in 212(67.1%) of the study population, followed by face flushed 201(63.6%), unable relax 166(52.5%), terrified 149(47.2%), fear losing control 134(42.4), hear pounding 118(37.3%) and scared 99(31.3%) respectively. *Conclusion:* Anxiety symptoms are prevalent among medical students of the University of Hail, faculty administration and academic staff should create a reactive measure to reduce anxiety among medical students and to provide educational counseling and psychological support for students to overcome these problems.

Keywords: Anxiety, Medical students, Shared symptoms

1. INTRODUCTION

Anxiety as it is widely distributed and probably weakens as depression, it is given little attention. Anxiety among medical students needs greater attention due to its significant implications (Quek et al., 2019). Medical education worldwide is confirmed to be associated with a high degree of psychological stress (Hope & Henderson, 2014; Hardeman et al., 2015), a factor that has been found to correlate with anxiety (Saravanan & Wilks, 2014). Medical students experience high levels of anxiety more often than the general population of the same age group (Hardeman et al., 2015). Moreover, the prevalence of depressive symptoms in medical students is also significantly higher than in the general population (Dahlin et al., 2005). These high prevalence rates of depression and anxiety among medical students were attributed to personal and/or institutional factors (Tempski et al., 2012). The prevalence of anxiety among medical students over the world was 33.8% (95% Confidence Interval: 29.2–38.7%) (Quek et al., 2019). Anxiety was widely distributed in the medical students from the Middle East and Asia. Regarding the gender, there was no statistically significance differences found in the prevalence of anxiety. About the thirds of the medical students around the world have anxiety, this prevalence rate making them more susceptible to anxiety than the general population (Quek et al., 2019). The prevalence of anxiety among medical students who study in the public universities has been evaluated to be 43.7% in Pakistan (Rab et al., 2008), 54.5% in Malaysia (Yusoff et al., 2013), 65.5% in Greece (Mancevska et al., 2008), and 69% in Beirut (Mehanna et al., 2006), whereas the prevalence of anxiety among medical students who study in the private medical colleges has been evaluated to be 29.4% in Israel (Lupo & Strous, 2011), 56% in India (Singh & Jha, 2013), and 60% in Pakistan (Inam et al., 2003). Anxiety is described by an unsuitable excessive or continual worrisome, these features may be associated by some symptoms like tachycardia, tremors, restlessness, fatigue, poor concentration, irritability, and disturbances in sleep patterns (Lader, 2015).

2. MATERIALS AND METHODS

This is a cross-sectional study enrolled in 316 Saudi medical students in the faculty of medicine, University of Hail, Northern Saudi Arabia. All participants were selected randomly regardless of level, age, and sex. All medical students in basic years (years 1, 2, and 3) as well as (years 4 and 5) phases of the academic year 2019–2020 were administered the questionnaire. The inclusion of the subjects was voluntary.

Ethical consideration

Each participant was asked to sign a written ethical consent before the interview.

Data analysis

Data were entered into computer analyzed using SPSS software. A Chi-square test was used.

3. RESULTS

Out of the 316 participants in our study, 236(74.7%) were males and 80(25.3%) were females, Their age ranged from 19 to 26 years old with a mean age of 23 years. The ratio of the males to the females was 2.95: 1. Regarding anxiety symptoms in the present study, they were found to be prevalent in 30.4% of the medical students. For anxiety status, the prevalence of each category was 69.6% (no anxiety), 17.6% (mild anxiety), and 12.8% (moderate anxiety). The most distributed symptoms of anxiety were fear worst which is found in 212(67.1%) of the study population, followed by face flushed 201(63.6%), unable relax 166(52.5%), terrified 149(47.2%), fear losing control 134(42.4), hear pounding 118(37.3%) and scared 99(31.3%) respectively as shown in table 1, 2, 3 and figure 1, 2, 3. Regarding gender, the present study showed a higher prevalence rate of anxiety symptoms in female medical students (47.1%) than males (25%). According to the distribution of symptoms of anxiety among females medical students, the most frequent is fear worst which is found in 66(82.5%) followed by face flushed 65(81.2%), unable relax 61(76.2%), terrified 54(67.5%), and fear losing control

52(65%) respectively as shown in table 1,2,3 and figure 1,2,3. On the other hand, the most distributed symptoms among males medical students is fear worst which is found in 146(61.9%) followed by face flushed 136(57.6%), unable relax 105(44.5%) and terrified 95(40.3%) respectively as shown in table 1, 2, 3 and figure 1, 2, 3. Concerning the status of anxiety symptoms, there is little variation between the mild and moderate symptoms e.g. fear worst (mild) is found in 101(32%) of the study population whereas fear worst (moderate) is found in 111(32.1%), face flushed (mild) is found in 98(31%) and face flushed (moderate) is found in 103(32.6%), unable relax (mild) is found in 94(29.7%) and unable relax (moderate) is found in 72(22.8%), terrified (mild) is found in 85(26.9%) and terrified (moderate) is found in 64(20.3%) respectively as shown in table 1, 2, 3 and figure 1, 2, 3.

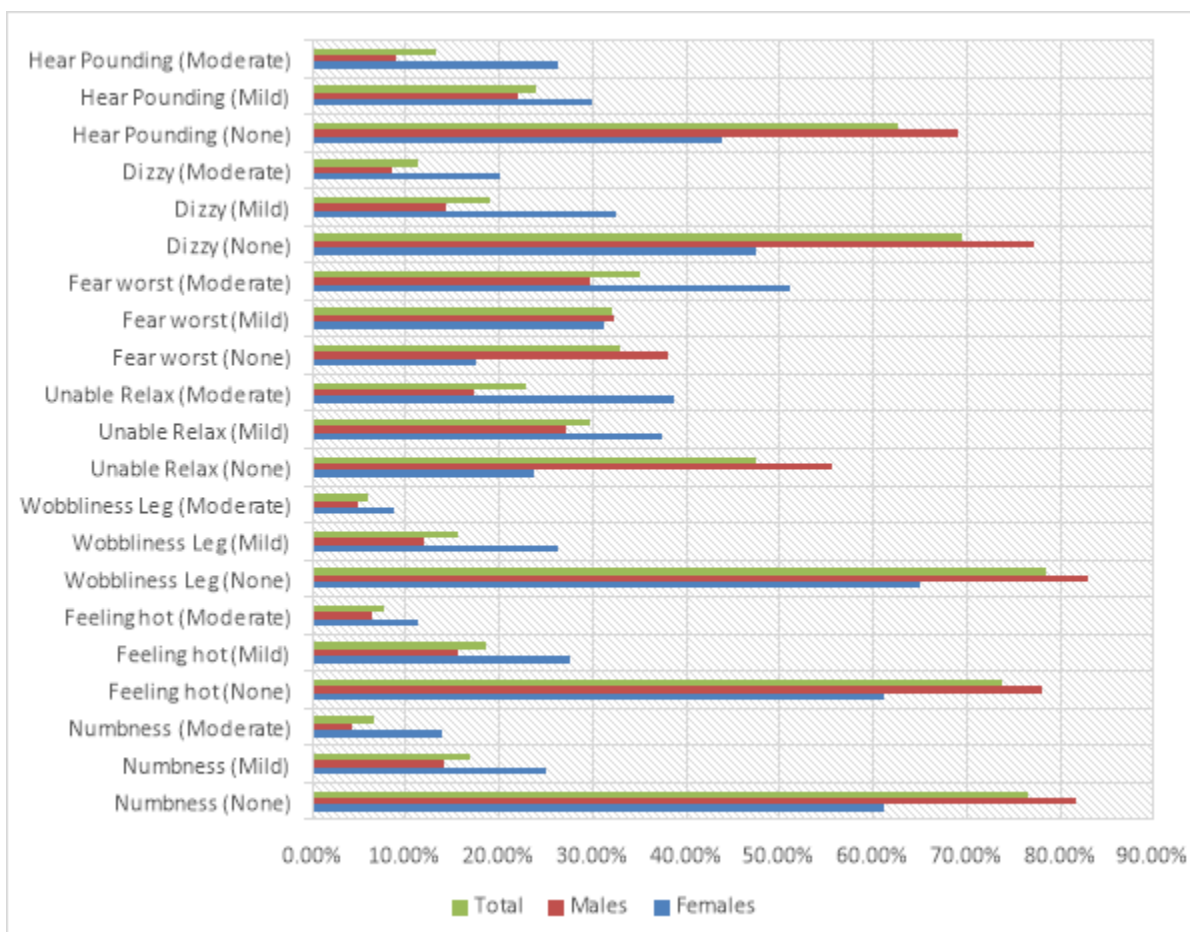


Figure 1 Description of the study population by symptoms of anxiety.

Table 1 Distribution of study population by symptoms of anxiety.

| Symptoms | Variables | Female | Male | Total |
|-----------------------|-----------|--------|------|-------|
| Numbness | None | 49 | 193 | 242 |
| | Mild | 20 | 33 | 53 |
| | Moderate | 11 | 10 | 21 |
| | Total | 80 | 236 | 316 |
| Feeling hot | None | 49 | 184 | 233 |
| | Mild | 22 | 37 | 59 |
| | Moderate | 9 | 15 | 24 |
| | Total | 80 | 236 | 316 |
| Wobbliness Leg | None | 52 | 196 | 248 |
| | Mild | 21 | 28 | 49 |
| | Moderate | 7 | 12 | 19 |

| | | | | |
|----------------------|----------|----|-----|-----|
| | Total | 80 | 236 | 316 |
| Unable Relax | | | | |
| | None | 19 | 131 | 150 |
| | Mild | 30 | 64 | 94 |
| | Moderate | 31 | 41 | 72 |
| | Total | 80 | 236 | 316 |
| Fear worst | | | | |
| | None | 14 | 90 | 104 |
| | Mild | 25 | 76 | 101 |
| | Moderate | 41 | 70 | 111 |
| | Total | 80 | 236 | 316 |
| Dizzy | | | | |
| | None | 38 | 182 | 220 |
| | Mild | 26 | 34 | 60 |
| | Moderate | 16 | 20 | 36 |
| | Total | 80 | 236 | 316 |
| Hear Pounding | | | | |
| | None | 35 | 163 | 198 |
| | Mild | 24 | 52 | 76 |
| | Moderate | 21 | 21 | 42 |
| | Total | 80 | 236 | 316 |

Table 2 Distribution of study population by symptoms of anxiety.

| Symptoms | Variables | Female | Male | Total |
|----------------------------|-----------|--------|------|-------|
| Unsteady | | | | |
| | None | 38 | 184 | 222 |
| | Mild | 25 | 34 | 59 |
| | Moderate | 17 | 18 | 35 |
| | Total | 80 | 236 | 316 |
| Terrified | | | | |
| | None | 26 | 141 | 167 |
| | Mild | 22 | 63 | 85 |
| | Moderate | 32 | 32 | 64 |
| | Total | 80 | 236 | 316 |
| Feeling Chocking | | | | |
| | None | 50 | 202 | 252 |
| | Mild | 18 | 20 | 38 |
| | Moderate | 12 | 14 | 26 |
| | Total | 80 | 236 | 316 |
| Hands Trembling | | | | |
| | None | 52 | 201 | 253 |
| | Mild | 19 | 17 | 36 |
| | Moderate | 9 | 18 | 27 |
| | Total | 80 | 236 | 316 |
| Shaky | | | | |
| | None | 47 | 208 | 255 |
| | Mild | 22 | 18 | 40 |
| | Moderate | 11 | 10 | 21 |
| | Total | 80 | 236 | 316 |
| Fear losing control | | | | |
| | None | 28 | 154 | 182 |

| | | | | |
|----------------------------|----------|-----|-----|-----|
| Difficult breathing | Mild | 24 | 44 | 68 |
| | Moderate | 28 | 38 | 66 |
| | Total | 80 | 236 | 316 |
| | None | 57 | 218 | 275 |
| | Mild | 11 | 10 | 21 |
| | Moderate | 12 | 8 | 20 |
| Total | 80 | 236 | 316 | |

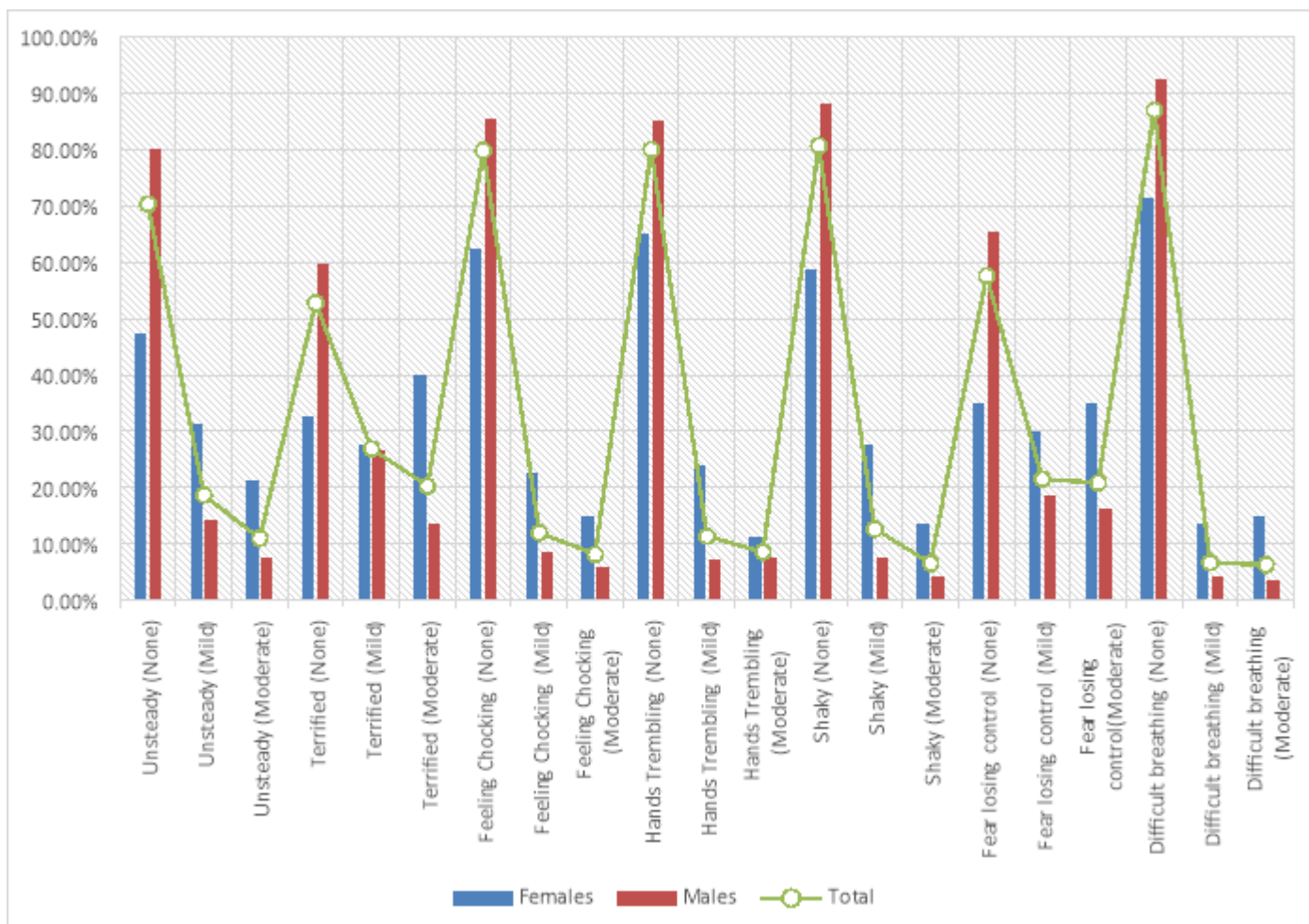


Figure 2 Description of the study population by symptoms of anxiety.

Table 3 Distribution of study population by symptoms of anxiety.

| Symptoms | Variables | Female | Male | Total |
|-------------------|-----------|--------|------|-------|
| Fear Dying | None | 60 | 210 | 270 |
| | Mild | 10 | 18 | 28 |
| | Moderate | 10 | 8 | 18 |
| | Total | 80 | 236 | 316 |
| Scared | None | 42 | 175 | 217 |
| | Mild | 18 | 42 | 60 |
| | Moderate | 20 | 19 | 39 |
| | Total | 80 | 236 | 316 |

| | | | | |
|-----------------------|----------|----|-----|-----|
| Indigestion | None | 54 | 189 | 243 |
| | Mild | 12 | 31 | 43 |
| | Moderate | 14 | 16 | 30 |
| | Total | 80 | 236 | 316 |
| Faint | None | 65 | 216 | 281 |
| | Mild | 12 | 13 | 25 |
| | Moderate | 3 | 7 | 10 |
| | Total | 80 | 236 | 316 |
| Face Flushed | None | 15 | 100 | 115 |
| | Mild | 24 | 74 | 98 |
| | Moderate | 41 | 62 | 103 |
| | Total | 80 | 236 | 316 |
| Hot Cold Sweat | None | 60 | 194 | 254 |
| | Mild | 13 | 24 | 37 |
| | Moderate | 7 | 18 | 25 |
| | Total | 80 | 236 | 316 |

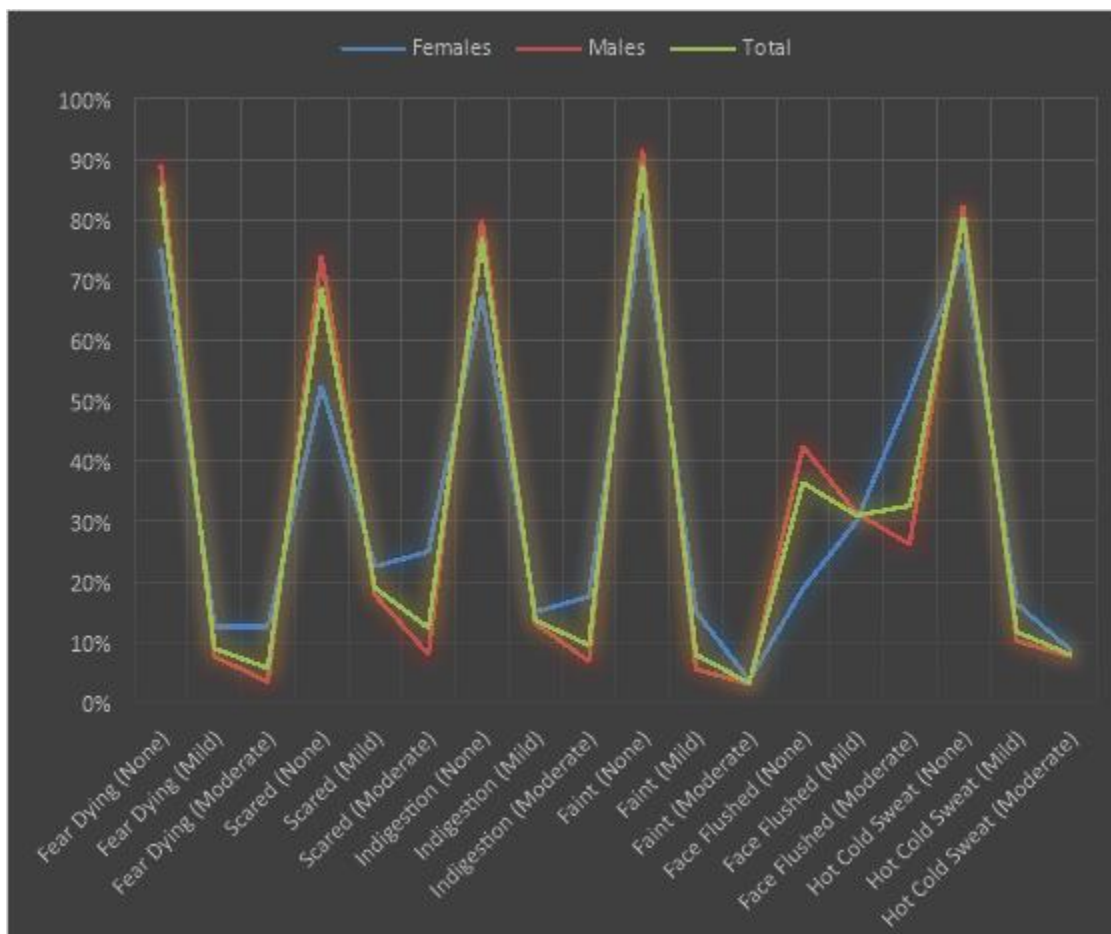


Figure 3 Description of the study population by symptoms of anxiety.

4. DISCUSSION

Medical education & medical professions are among the most challenging and most stressful ones. Anxiety constitutes an increasing public health problem among medical students. There are many studies over the world investigated the shared symptoms of anxiety which are prevalent among medical students in different countries including some Middle Eastern countries, but little is known among medical students in Saudi Arabia. In this study we investigated the shared symptoms of anxiety among medical students, which include, numbness, feeling hot, wobbliness leg, unable relax, fear worst, dizzy, heart-pounding, unsteady, terrified, feeling chocking, hands trembling, shaky, fear losing control, difficult breathing, fear dying, scared, indigestion, faint and face flushed. Concerning the most distributed symptoms of anxiety from these mentioned above, is the fear worst which was found in 212(67.1%) of the study population, followed by face flushed 201(63.6%), unable relax 166(52.5%), terrified 149(47.2%), fear losing control 134(42.4), hear pounding 118(37.3%) and scared 99(31.3%) respectively. Our findings showed that cumulatively, mild to moderate symptoms of anxiety were prevalent in 30.4% of medical students in hail university, Kingdom of Saudi Arabia. This finding is consistent with previous studies that reported the prevalence rates of anxiety in different countries (Ibrahim & Abdelreheem, 2015; Alvi et al., 2010; Bunevicius et al., 2008; Ediz et al., 2017; Goebert et al., 2009). Anxiety was prevalent in 43.9%, 51%, 21.9%, and 43% among medical students in Egypt (Ibrahim & Abdelreheem, 2015), Bahrain (Mahroon et al., 2018), Estonia (Eller et al., 2006), and Lithuania (Bunevicius et al., 2008), respectively. The few differences in prevalence rates of the previous reports compared to our finding may attribute to differences in culture and religion. There are also many several previous studies demonstrated results consistent with our finding. The prevalence of anxiety symptoms among medical students was 30.8% (Shawahna et al., 2020). The prevalence of anxiety symptoms of our study (30.4%) was consistent with the global prevalence (33.8%) estimated by a meta-analysis of 40,348 medical students across 69 studies (Quek et al., 2019). Regarding gender, the present study showed a higher prevalence rate of anxiety symptoms in female medical students (47.1%) than males (25%). This finding is inconsistent with the study of Queck et al (Quek et al., 2019) who showed subgroup analyses by gender, and found no statistically significant differences in the prevalence of anxiety between females and males. Our finding is also inconsistent with other studies conducted in Palestine by Shawna et al (Shawahna et al., 2020) who reported that gender is not significantly associated with the prevalence of anxiety symptoms.

5. CONCLUSION

Symptoms of anxiety are prevalent among medical students of the University of Hail, faculty administration and academic staff should create a reactive measure to reduce anxiety among medical students and to provide educational counseling and psychological support for students to overcome these problems.

Funding: Self-funding, this study has not received any external funding.

Conflict of Interest: Author declares no conflict of interest.

Informed consent: Written & Oral informed consent was obtained from all individual participants included in the study. Additional informed consent was obtained from all individual participants for whom identifying information is included in this manuscript.

Ethical approval: This study was approved by the Medical Ethics Committee of faculty of medicine, University of Hail. Ethical Approval number: EC-00077a/EC/UOH.09/19.

Data and materials availability

All data associated with this study are present in the paper.

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