FAKTOR-FAKTOR KECEMASAN REMAJA SAAT PANDEMI COVID-19: STUDI LITERATUR

SKRIPSI

Oleh:

Dewi Afifah

NIM. 17010049

PROGRAM STUDI ILMU KEPERAWATAN
FAKULTAS ILMU KESEHATAN
UNIVERSITAS dr. SOEBANDI

2021

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Untuk Memenuhi Persyaratan
Memperoleh Gelar Sarjana Keperawatan

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HALAMAN PERSEMBAHAN

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Motto

“Ambillah kebaikan dari apa yang dikatakan, jangan melihat siapa yang mengatakannya.”

(Nabi Muhammad SAW)

LEMBAR PERSETUJUAN

Hasil penelitian ini telah diperiksa oleh pembimbing dan telah disetujui untuk mengikuti seminar hasil pada Program Studi Ilmu Keperawatan Universitas dr. Soebandi Jember

Jember, 18 Agustus 2021

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HALAMAN PENGESAHAN

Skripsi yang berjudul Faktor-Faktor Kecemasan Remaja Saat Pandemi Covid-19: Studi Literatur telah diuji dan disahkan oleh Program Studi Ilmu Keperawatan pada :

Hari : Rabu

Tanggal : 18 Agustus 2021

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LEMBAR PERNYATAAN KEASLIAN PENELITIAN

Saya yang bertanda tangan dibawah ini menyatakan dengan sesungguhnya bahwa skripsi yang berjudul "Faktor-Faktor Kecemasan Remaja Saat Pandemi Covid-19: Studi Literatur" adalah karya sendiri dan belum pernah diajukan untuk memperoleh gelar kesarjanaan perguruan tinggi dimanapun:

Nama : Dewi Afifah

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Adapun bagian-bagian tertentu dalam penyusunan skripsi *Literatur Review* ini saya kutip dari hasil karya orang lain telah dituliskan sumbernya secara jelas sesuai dengan norma, kaidah etika penulisan ilmiah.

Apabila dikemudian hari ditemukan adanya kecurangan dalam skripsi *Literatur Review* ini, saya bersedia menerima sanksi pencabutan gelar akademis yang saya andang dan sanksi-sanksi lainnya dengan peraturan perundang-undangan yang berlaku.

Jember, 18 Agustus 2021

Dewi Afifah
NIM: 17010049

SKRIPSI

Faktor-Faktor Kecemasan Remaja Saat Pandemi Covid-19

Literatur Review

Oleh:

Dewi Afifah

17010049

Pembimbing

Dosen pembimbing Utama : Susilawati, S.ST., M.Kes

Dosen pembimbing Anggota : Irwina Angelia S., S.Kep., Ns., M.Kep

ABSTRAK

Afifah, Dewi* Susilawati** Silvanasari, Irwina Angelia ***. 2021.**Faktor-Faktor Kecemasan Remaja Saat Pandemi COVID-19 : *Literature Review***. Program Studi Ilmu Keperawatan Universitas dr. Soebandi Jember.

Pendahuluan: Pandemi COVID-19 menyebabkan kecemasan pada remaja. Tujuan penelitian ini yaitu untuk mengetahui faktor-faktor kecemasan remaja saat pandemi COVID-19 melalui *Literatur review***. Metode:** Desain penelitian ini adalah *literature review*. Pencarian artikel menggunakan *Database Pubmed, Science Direct,* dan *Google Scholar* tahun 2020-2021 yang telah dilakukan proses seleksi menggunakan format PICOS yang telah memenuhi kriteria inklusi. **Hasil:** Hasil tinjauan *literature review* ini yang diperoleh berdasarkan hasil analisis dari lima artikel faktor kecemasan remaja saat pandemi COVID-19 yaitu usia yang lebih muda lebih rentan mengalami kecemasan, remaja laki-laki lebih banyak mengalami kecemasan, pengetahuan remaja tentang COVID-19 mempengaruhi kecemasan remaja, merasa terhubung secara sosial selama masa karantina mempengaruhi kecemasan remaja, kecemasan remaja saat pandemi COVID-19 berada pada tingkat ringan sampai sedang. **Diskusi:** Analisis dari lima artikel diperoleh hasil bahwa faktor usia, jenis kelamin, pengetahuan, dan hubungan sosial berhubungan dengan kecemasan remaja saat pandemi COVID-19. Saran: Remaja sebaiknya dapat meningkatkan pengetahuan dan hubungan dengan teman sebaya selama karantina melalui sosial media untuk mengurangi kecemasan remaja saat pandemi COVID-19.

Kata kunci : Faktor-faktor Kecemasan, Remaja, COVID-19

*Peneliti : Dewi Afifah

**pembimbing I : Susilawati, S.ST., M.Kes

***Pembimbing II:Irwina Angelia Silvanasari, S.Kep., Ns., M.Kep

ABSTRACT

Afifah, Dewi* Susilawati** Silvanasari, Irwina Angelia ***. 2021. **Adolescent Anxiety Factors During the COVID-19 Pandemic: Literature Review**. Nursing Science Study Program, University of dr. Soebandi Jember.

Introduction: The COVID-19 pandemic causes anxiety in adolescents. The purpose of this study was to determine the factors of adolescent anxiety during the COVID-19 pandemic through a literature review. **Methods:** The design of this study was a literature review. Search articles using the Pubmed, Science Direct, and Google Scholar databases for 2020-2021 which have been selected using the PICOS format that has met the inclusion criteria. **Results:** The results of this literature review were obtained based on the results of the analysis of five articles on adolescent anxiety factors during the COVID-19 pandemic, namely younger ages are more prone to anxiety, boys experience more anxiety, adolescent knowledge about COVID-19 affects anxiety. adolescents, feeling socially connected during the quarantine period affects adolescent anxiety, adolescent anxiety during the COVID-19 pandemic is at a mild to moderate level. **Discussion:** Analysis of five articles showed that age, gender, knowledge, and social relationships were related to adolescent anxiety during the COVID-19 pandemic. Suggestion: Teenagers should be able to increase their knowledge and relationships with peers during quarantine through social media to reduce adolescent anxiety during the COVID-19 pandemic.

Keywords: Anxiety Factors, Adolescents, COVID-19

*Researcher: Dewi Afifah

**Supervisor I : Susilawati, S.ST., M.Kes

*** Supervisor II: Irwina Angelia Silvanasari, S.Kep., Ns., M.Kep

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Jember, 18 Agustus 2021

Dewi Afifah
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BAB I

PENDAHULUAN

1.1 Latar Belakang

Pada saat ini dunia sedang dilanda pandemi yang cukup mengkhawatirkan, yaitu COVID-19. Hampir semua negara yang ada di dunia ini mengalami pandemi COVID-19 ini, tidak terkecuali Indonesia (Widiyani, dkk, 2020). *Corona virus Disease 2019* (Covid-19) adalah suatu kondisi infeksi yang dapat menyebar secara langsung atau tidak langsung dari satu orang ke orang lain dan menyebabkan penyakit pernapasan, mulai dari flu biasa hingga sindrom pernapasan akut (Chen et al., 2020).

Menurut Organisasi Kesehatan Dunia, COVID-19 adalah masalah kesehatan yang serius dan memiliki risiko lebih tinggi untuk penyakit parah dan menyebar dengan cepat di seluruh dunia. Perkembangan kasus COVID-19 di Indonesia dari bulan Maret sampai bulan Oktober, yaitu pada bulan Maret terdapat 2 kasus positif, di bulan Juni terdapat 50.185 kasus, di bulan Juli terdapat 100.303 kasus pada bulan Agustus terdapat 151.498 kasus, pada bulan september terdapat 200.035 kasus dan pada bulan oktober kasus COVID-19 di Indonesia mencapai 300.000 kasus(Satgas penanganan COVID-19, 2020). Penularan virus corona yang sangat cepat menjadikan WHO menetapkan virus corona sebagai pandemi pada 11 Maret 2020 (Mona, 2020). Beberapa langkah cepat dilakukan oleh pemerintah agar virus corona ini tidak menular dengan cepat, seperti menerapkan *work from home* (WFH), *social distancing*, dan lain-lain (Tursina, 2020).

Kondisi yang datang tiba-tiba ini membuat masyarakat tidak siap menghadapinya baik secara fisik ataupun psikis (Sabir & Phil, 2016). Kondisi psikologis yang dialami oleh masyarakat adalah rasa kecemasan apabila tertular (Fitria, 2020). Menurut Hurlock kecemasan merupakan bentuk perasaan khawatir, gelisah dan perasaan-perasaan lain yang kurang menyenangkan. Kecemasan sering timbul pada individu saat sedang berhadapan dengan situasi yang tidak menyenangkan (Muyasaroh, 2020). Rasa cemas dibagi menjadi empat tingkatan, yaitu cemas ringan, cemas sedang, cemas berat, dan cemas berat sekali. Tingkat kecemasan yang dirasakan setiap individu berbeda-beda, dipengaruhi oleh bagaimana individu tersebut menyesuaikan diri dan mengatasi situasi yang memicu kecemasan (Lisa Mutiara Anissa, Suryani, 2018).

Kecemasan ini juga dialami oleh para remaja (Gozali, Tjahyo, & Vidyarini, 2018), karena usia remaja disebut sebagai masa transisi atau peralihan karena terjadi pertumbuhan, perkembangan, dan perubahan secara biologis serta psikologis. Perubahan biologis ditandai dengan tumbuh dan berkembangnya seks primer sedangkan perubahan psikologis ditandai dengan berubah-ubahnya sikap, perasaan, dan emosi. Masa peralihan ini dijuluki masa yang penuh dengan badai dan tekanan, karena menimbulkan pergolakan emosi, rasa cemas, dan ketidaknyamanan sebab remaja tersebut diharuskan beradaptasi dan menerima semua perubahan yang terjadi (Bariyyah Hidayati, 2016).

Remaja yang kesehariannya hidup produktif dengan kegiatan, kini hanya dapat berdiam diri di rumah dikarenakan masa karantina yang mengharuskan tetap berada di rumah. Saat keadaan normal untuk menghilangkan kepenatan, remaja

bisa pergi rekreasi bersama teman sebayanya dan menikmati waktu di luar rumah, tetapi dengan kondisi sekarang kegiatan itu belum dapat dilakukan sampai waktu yang belum ditentukan. Hal tersebut jelas menyebabkan remaja memiliki kecenderungan menjadi cemas dan tertekan. Dampak dari pandemi virus ini tidak hanya dirasakan secara fisik namun hal ini juga mempengaruhi secara mental(Cahyanthi, 2020).

Hasil penelitian yang dilakukan oleh Linda Fitria dan Ifdil diperoleh hasil tingkat kecemasan remaja pada masa pandemi covid-19 berada pada kategori rendah sebesar 2,1%, kategori sedang 43,9% dan kategori tinggi 54%. Kesimpulan dari penelitian tersebut yaitu sebanyak 54% tingkat kecemasan remaja berada pada kategori tinggi. Hal ini kemungkinan besar disebabkan karena kurangnya informasi yang diperoleh remaja terkait dengan pandemi covid-19 ini (Purwanto et al., 2020).

Menurut Habibullah, dkk (2019) menyebutkan beberapa faktor yang mempengaruhi kecemasan seseorang yaitu: Rasa percaya diri, usia, jenis kelamin, dukungan sosial, kemampuan dalam berkomunikasi dan pola pikir. Menurut Mubarak, dkk (2015:444) faktor yang mempengaruhi kecemasan dibagi menjadi dua yaitu: faktor internal dan eksternal. Faktor internal meliputi usia, pengalaman, dan aset fisik, sedangkan faktor eksternal meliputi pengetahuan, pendidikan, finansial/material,obat dan dukungan sosial. Menurut Djiemi, (2020) faktor-faktor penyebab kecemasan saat pandemi COVID-19 yaitu: isolasi sosial, kurangnya interaksi dan gerakan fisik yang terbatas serta faktor psikologi.

Kecemasan yang dialami oleh remaja pada masa pandemi ini tidak bisa dibiarkan begitu saja (Harirah & Rizaldi, 2020). Untuk mengatasi kecemasan pada remaja peran orangtua sangat dibutuhkan (Fuad & Budiyono, 2012), diantaranya selalu mendampingi, memotivasi, memberikan pengetahuan tentang COVID-19. Ada beberapa hal yang dapat dilakukan untuk membantu remaja mengatasi kecemasan adalah dengan memberikan pelayanan seperti layanan konseling individual, bimbingan dan konseling kelompok. Berbagai pendekatan konseling dapat diterapkan dalam kegiatan ini. Berdasarkan beberapa penelitian menyatakan menggunakan pendekan *Cognitive Behavioral Therapy* (CBT) lebih efektif untuk mengatasi kecemasan (Apriliana, Suranata, & Dharsana, 2019).

1.2 Rumusan masalah

Apa saja faktor-faktor yang berhubungan dengan kecemasan remaja saat pandemi COVID-19: Studi Literatur?

1.3 Tujuan

1.3.1 Tujuan umum

Untuk mengetahui faktor-faktor kecemasan remaja saat pandemi COVID-19: Studi Literatur

1.3.2 Tujuan khusus

1. Mengidentifikasi faktor usia remaja yang mengalami kecemasan
2. Mengidentifikasi faktor jenis kelamin remaja yang mengalami kecemasan
3. Mengidentifikasi faktor pengetahuan remaja yang mengalami kecemasan
4. Mengidentifikasi faktor hubungan sosial remaja yang mengalami kecemasan

5. Mengidentifikasi kecemasan remaja saat pandemi COVID-19

1.4 Manfaat penelitian

1.4.1 Bagi peneliti

Menambah wawasan dan pengetahuan peneliti tentang faktor-faktor yang berhubungan dengan kecemasan remaja saat pandemi COVID-19 berdasarkan studi literatur

1.4.2 Bagi institusi

Hasil penelitian ini diharapkan dapat berguna untuk menambah pengetahuan mahasiswa tentang faktor-faktor yang berhubungan dengan kecemasan remaja saat pandemi COVID-19

1.4.3 Bagi masyarakat

Penelitian ini diharapkan dapat berguna bagi masyarakat untuk mengetahui faktor apa saja yang berhubungan dengan kecemasan remaja saat pandemi COVID-19

BAB II

TINJAUAN PUSTAKA

2.1 Konsep Remaja

2.1.1 Definisi Remaja

Menurut WHO (*World Health Organization*) bahwa definisi remaja dikemukakan melalui tiga kriteria, yaitu biologis, psikologis, dan social ekonomi. Sehingga dapat dijabarkan bahwa remaja adalah suatu masa dimana individu berkembang dari saat pertama kali menunjukkan tanda-tanda seksual sekundernya sampai saat ia mencapai kematangan sosial. Individu yang mengalami perkembangan psikologis dan pola identifikasi dari anak-anak menjadi dewasa. Serta individu yang mengalami peralihan dari ketergantungan menjadi keadaan yang relatif lebih mandiri (Sarwono, 2013).

Menurut WHO, remaja adalah penduduk dalam rentang usia 10-19 tahun, menurut Peraturan Menteri Kesehatan RI Nomor 2005 tahun 2014, remaja adalah penduduk dalam rentang usia 10-18 tahun dan menurut Badan Kependudukan dan Keluarga Berencana (BKKBN) rentang usia remaja adalah 10-24 tahun dan belum menikah (Kemenkes RI, 2014).

2.1.2 Karakteristik Remaja

Tahap kehidupan remaja merupakan tahap yang unik dari keseluruhan tahap dalam kehidupan kita. Masa remaja merupakan periode transisi dari fase kanak-kanak ke fase dewasa. Pubertas pada perempuan terjadi lebih awal dibandingkan laki-laki, yaitu pada usia 8 sampai 13

tahun. Pubertas ditandai dengan timbulnya tanda-tanda seks sekunder dan adanya pacu tumbuh (*growth spurt*). Fase pacu tumbuh pada perempuan terjadi pertumbuhan tinggi badan yang berlangsung lebih cepat dibandingkan remaja laki-laki. Remaja perempuan akan mengalami pertambahan tinggi badan maksimal 9 cm/tahun, dengan total pertambahan tinggi badan selama pubertas sekitar 20-25 cm. Pacu tumbuh pada remaja putri dimulai bersamaan dengan mulainya pertumbuhan payudara. Terjadinya menstruasi menunjukkan bahwa pertambahan tinggi badan remaja sudah mendekati akhir (Kemendikbud RI, 2016).

Remaja akan mengalami perubahan biologis dan fisiologis pada masa pubertas ini, selain itu remaja juga mengalami perubahan psikologis dan sosial. Perubahan tersebut dipengaruhi oleh faktor sosio-kultural dan ekonomi. Berikut ini beberapa perubahan yang terjadi selama masa remaja:

a. Peningkatan emosional

Peningkatan emosional ini merupakan hasil dari perubahan fisik terutama hormon yang terjadi pada masa remaja. Dalam segi sosial, peningkatan emosi ini merupakan tanda bahwa remaja berada dalam kondisi yang berbeda dari sebelumnya. Banyak sekali tuntutan dan tekanan yang ditujukan pada remaja, seperti mereka diharapkan untuk lebih mandiri, bertanggung jawab dan tidak lagi bertingkah seperti anak-anak.

b. Perubahan yang cepat secara fisik juga disertai kematangan seksual

Perubahan yang sangat cepat ini membuat remaja merasa tidak yakin akan kemampuan dirinya. Perubahan fisik yang sangat cepat sangat berpengaruh terhadap konsep diri (*self image*) pada remaja.

c. Perubahan dalam hal yang menarik bagi dirinya dan hubungan dengan orang lain

Remaja akan memiliki tanggungjawab yang lebih besar pada fase ini, maka remaja diharapkan dapat mengarahkan ketertarikan mereka pada hal-hal yang lebih penting. Remaja juga akan mengalami perubahan dalam berhubungan dengan orang lain, seperti remaja tidak lagi berhubungan hanya dengan individu dari jenis kelamin yang sama, tetapi juga dengan lawan jenis dan dengan orang dewasa.

d. Perubahan nilai

Remaja menginginkan kebebasan, tetapi disisi lain mereka takut akan tanggungjawab yang menyertai kebebasan tersebut. Remaja mulai meragukan kemampuan mereka sendiri untuk memikul tanggungjawab tersebut (Kemendikbud RI, 2016).

2.2 Konsep Kecemasan Remaja

2.2.1 Definisi Kecemasan

Kecemasan adalah suatu kejadian yang mudah terjadi pada seseorang karena suatu faktor tertentu tidak spesifik (Sari & Batubara, 2017). *Anxietas*/kecemasan adalah suatu keadaan aprehensi atau keadaan khawatir yang mengeluhkan bahwa sesuatu yang buruk akan terjadi.

Kecemasan merupakan respon yang tepat terhadap ancaman, tetapi kecemasan dapat menjadi abnormal apabila tingkatannya tidak sesuai dengan porsi ancamannya ataupun datang tanpa adanya sebab tertentu (Nevid, Rathus, & Greene, 2006).

Spielberger (1971) mendefinisikan kecemasan sebagai suatu bentuk emosi yang berdasarkan oleh simbol-simbol, kewaspadaan, dan unsur-unsur yang tidak pasti. Selanjutnya dijelaskan bahwa konsep ancaman yaitu penilaian dari orang lain yang bersifat negatif sehingga mengancam diri individu tersebut. Kecemasan juga merupakan keadaan yang mana pola tingkah laku direpresentasikan dengan keadaan emosional yang dihasilkan dari pikiran-pikiran dan perasaan yang tidak menyenangkan (Purnamarini, Setiawan & Hidayat, 2016).

2.2.2 Kecemasan remaja saat pandemi COVID-19

Remaja yang kesehariannya hidup produktif dengan kegiatan, kini hanya dapat berdiam diri di rumah dikarenakan masa karantina yang mengharuskan tetap berada di rumah. Saat keadaan normal untuk menghilangkan kepenatan, remaja bisa pergi rekreasi bersama teman sebayanya dan menikmati waktu di luar rumah, tetapi dengan kondisi sekarang kegiatan itu belum dapat dilakukan sampai waktu yang belum ditentukan. Hal tersebut jelas menyebabkan remaja memiliki kecenderungan menjadi cemas dan tertekan. Dampak dari pandemi virus ini tidak hanya dirasakan secara fisik namun hal ini juga mempengaruhi secara mental (Cahyanthi, 2020).

Adanya PSBB dan pembelajaran di rumah serta dibatalkannya berbagai aktivitas penting, banyak remaja kehilangan beberapa momen besar di kehidupan mereka dan juga momen keseharian seperti berkumpul dengan teman dan berpartisipasi di sekolahnya. Para remaja menghadapi situasi baru ini bukan hanya merasa kecewa, namun juga kecemasan dan perasaan terisolasi yang membebani terhadap perubahan hidup akibat wabah yang secara cepat. Saat kesehatan mental remaja tertekan, bisa dilihat tanda-tanda seperti terlihat tidak semangat, nafsu makan berkurang, pola tidur terganggu, dan juga khawatir yang berlebihan (Rosi Oktari, 2020).

2.2.3 Klasifikasi tingkat kecemasan

Empat tingkat kecemasan berdasarkan Videbeck (2011) menunjukkan masing-masing perubahan secara psikologis dan fisiologis yang dijabarkan sebagai berikut:

a. *Mild Anxiety* (Kecemasan Ringan) Kecemasan yang terjadi akibat kejadian dalam sehari-hari dimana seseorang akan merasa waspada dan stimulasi sensorik akan meningkat. Seseorang menjadi lebih peka dalam melihat, mendengar, dan merasakan. Kecemasan ringan sering memotivasi orang untuk melakukan perubahan atau melakukan kegiatan untuk mencapai tujuan. Manifestasi klinis yang muncul adalah iritabel, peningkatan motivasi, efektif pemecahan masalah dan peningkatan kemampuan belajar. Secara fisik muncul kegelisahan, kesulitan tidur, dan hipersensitif terhadap keributan.

b. *Moderate Anxiety* (Kecemasan Sedang) Pada tingkat ini seseorang akan lebih fokus terhadap urusan yang akan dilakukan termasuk mempersempit pandangan perseptual sehingga apa yang dilihat, didengar, dan dirasakan menjadi lebih sempit. Jadi lebih fokus terhadap sumber kecemasan yang dihadapi namun masih bisa melakukan hal lain. Manifestasi klinis yang muncul adalah denyut jantung, pernapasan, ketegangan otot meningkat, bicara cepat dengan volume tinggi, kemampuan konsentrasi menurun, mulut kering, sakit kepala, dan sering buang air kecil.
c. *Severe Anxiety* (Kecemasan Berat) Ditandai dengan pengurangan signifikan terhadap pandangan konseptual dimana seseorang akan menjadi fokus pada sumber kecemasan yang dirasakan dan tidak berpikir lagi tentang hal lain. Manifestasi klinis yang muncul adalah merasa ketakutan, berteriak, perilaku ritualistik, sakit kepala berat, mual, muntah, diare, gemetar, kaku, pucat, takikardi, dan nyeri dada. Semua perilaku yang muncul bertujuan untuk mengurangi kecemasan.
d. Panik Panik ditandai dengan bidang persepsi semakin sempit dan tidak bisa memproses rangsangan lingkungan sehingga mengalami kehilangan kendali terhadap dirinya yang mungkin tidak mampu berpikir rasional. Manifestasi klinis yang muncul tidak dapat ditentukan batas waktunya namun dapat berlangsung selama 5-30 menit dengan gejala susah bernapas, dilatasi pupil, palpitasi, pucat, pembicaraan inkoheren, berteriak, menjerit, bahkan mengalami halusinasi dan delusi serta keinginan bunuh diri.

2.2.4 Aspek-aspek dalam kecemasan

Gail W. Stuart (dalam Annisa & Ifdil, 2016) membagi kecemasan (anxiety) dalam respon perilaku, kognitif, dan afektif, diantaranya:

a. Perilaku, berupa gelisah, tremor, berbicara cepat, kurang koordinasi, menghindar, lari dari masalah, waspada, ketegangan fisik, dll.
b. Kognitif, berupa konsentrasi terganggu, kurang perhatian, mudah lupa, kreativitas menurun, produktivitas menurun, bingung, sangat waspada, takut kehilangan kendali, mengalami mumpi buruk, dll.
c. Afektif, berupa tidak sabar, tegang, gelisah, tidak nyaman, gugup, waspada, ketakutan, waspada, kekhawatiran, mati rasa, merassa bersalah, malu, dll.

Menurut Vye (dalam Purnamarini, Setiawan, & Hidayat, 2016) mengungkapkan bahwa gejala kecemasan dapat diidentifikasikan melalui dalam tiga komponen yaitu:

a. Komponen koginitif: Cara individu memandang keadaan yaitu mereka berfikir bahwa terdapat kemungkinan-kemungkinan buruk yang siap mengintainya sehingga menimbulan rasa ragu, khawatir dan ketakutan yang berlebih ketika hal tersebut terjadi. Mereka juga menganggap dirinya tidak mampu, sehingga mereka tidak percaya diri dan menganggap situasi tersebut sebagai suatu ancaman yang sulit dan kurangmampu untuk diatasi.
b. Komponen Fisik: Pada komponen fisik berupa gejala yang dapat dirasakan langsung oleh fisik atau biasa disebut dengan sensasi fisioligis. Gejala yang dapat terjadu seperti sesak napas, detak jantung yang lebih cepat,

sakit kepada, sakit perut dan ketegangan otot. Gejala ini merupakan respon alami yang terjadi pada tubuh saat individu merasa terancam atau mengalami situasi yang berbahaya. Terkadang juga menimbulkan rasa takut pada saat sensasi fisologis tersebut terjadi.

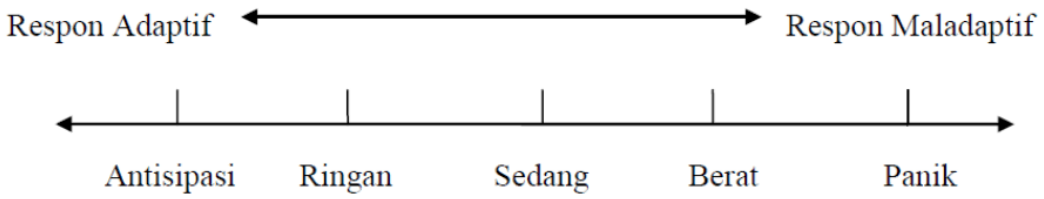
c. Komponen Perilaku: Pada komponen perilaku melibatkan perilaku atau tindakan seseorang yang overcontrolling.

Greenberger dan Padesky (dalam Fenn & Byrne, 2013) menjabarkan bahwa ada empat aspek kecemasan yaitu:

a. *Physical symptoms* atau reaksi fisik yang terjadi pada orang yang cemas, seperti telapak tangan yang berkeringat, otot tegang, jantung berdebar, sulit bernafas, pusing ketika individu menghadapi kecemasan.
b. *Thought*, yaitu pemikiran negatif dan irasional individu berupa perasaan tidak mampu, tidak siap, dan merasa tidak memiliki keahlian, seperti tidak siap dalam menghadapi pandemi covid-19 ini.
c. *Behavior*, individu dengan kecemasan akan cenderung menghindari situasi penyebab kecemasan tersebut dikarenakan individu merasa dirinya terganggu dan tidak nyaman seperti keringat dingin, mual, sakit kepala, leher kaku, dan juga gangguan tidur saat memikirkan pandemi covid-19.
d. *Feelings*, yaitu suasana hati individu dengan kecemasan cenderung meliputi perasaan marah, panik, gugup yang dapat memunculkan kesulitan untuk memutuskan sesuatu seperti perasaan panik saat ada pemberitahuan bahwa kasus terkonfirmasi virus covid-19 mengalami kenaikan.

2.2.5 Rentang Respon Kecemasan

Stuart (2006), menjelaskan rentang respon individu terhadap cemas berfluktuasi antara respon adaptif dan maladaptif. Rentang respon yang paling adaptif adalah antisipasi dimana individu siap siaga untuk beradaptasi dengan cemas yang mungkin muncul. Sedangkan rentang yang paling maladaptif adalah panik dimana individu sudah tidak mampu lagi berespon terhadap cemas yang dihadapi sehingga mengalami ganguan fisik, perilaku maupun kognitif. Seseorang berespon adaptif terhadap kecemasannya maka tingkat kecemasan yang dialaminya ringan, semakin maladaptif respon seseorang terhadap kecemasan maka semakin berat pula tingkat kecemasan yang dialaminya, seperti gambar dibawah ini:



Gambar 2.1 Rentang Respon Kecemasan (Sumber: Stuart, 2006)

2.2.6 Patofisiologi Kecemasan

Pengaturan ansietas berhubungan dengan aktivitas *neurotransmitter gamma-aminobutyric acid* (GABA), yang mengontrol aktivitas, atau tingkat pelepasan, pembakaran, dan merupakan neuron di bagian otak yang bertanggung jawab menyebabkan ansietas. Bagian otak yang berperan adalah sistem limbik yang merupakan pusat emosional dan

pusat utama norepinefrin. *Neurotransmitter* yang bersifat stimulus (Keliat, 2016).

Sistem norepinefrein (NE) merespon terhadap *fight-or-flight.* Bagian dari otak yang memproduksi NE adalah lokus seruleus. Hal ini dihubungkan dengan jalur *neurotransmitter* ke struktur lain dari otak seperti amigdala, hipokampus, dan korteks serebral yang berhubungan dengan ansietas (Keliat, 2016).

2.3 Faktor-Faktor Yang Mempengaruhi Kecemasan

2.3.1 Faktor-Faktor Yang Mempengaruhi Kecemasan

Blacburn & Davidson (dalam Annisa dan Ifdil, 2016) menyebutkan beberapa faktor yang mempengaruhi kecemasan, seperti pengetahuan yang dimiliki dalam menyikapi suatu situasi yang mengancam serta mampu mengetahui kemampuan mengendalikan diri dalam menghadapi kecemasan tersebut. Terdapat beberapa hal yang dapat menyebabkan kecemasan. Menurut Habibullah, dkk (2019) menyebutkan beberapa faktor yang mempengaruhi kecemasan seseorang meliputi:

a. Rasa percaya diri

Percaya diri merupakan keyakinan seseorang terhadap segala aspek kelebihan yang dimilikinya dan kenyataan tersebut membuatnya merasa mampu untuk bisa mencapai berbagai tujuan hidup. Individu yang memiliki kepercayaan diri besar akan mengurangi kecemasan. Sebaliknya jika seorang individu memiliki kepercayaan diri yang rendah maka kecemasannya akan meningkat. Seseorang yang mempunyai self efficacy

yang tinggi akan mempunyai kemampuan untuk menyesuaikan diri lebih baik, lebih dapat mempengaruhi situasi dan dapat menggunakan kemampuan yang dimiliki dengan lebih baik, sehingga perasaan terancam dan tidak aman dapat dikendalikan.

b. Usia

Seseorang yang mempunyai usia lebih muda ternyata lebih mudah mengalami gangguan kecemasan dari pada seseorang yang lebih tua, tetapi ada juga yang berpendapat sebaliknya terhitung mulai saat dilahirkan sampai saat berulang tahun. Semakin cukup umur, tingkat kematangan dan kekuatan sesorang akan lebih matang dalam berfikir dan bekerja. Dari segi kepercayaan masyarakat seseorang yang lebih di percaya dari orang yang belum cukup tinggi kedewasaannya. Hal ini sebagai akibat dari pengalaman dan kematangan jiwanya. Usia menunjukkan ukuran waktu pertumbuhan dan perkembangan seorang individu.

c. Jenis kelamin

Perempuan lebih cemas akan ketidakmampuannya dibanding laki-laki. Laki-laki lebih aktif, eksploratif, sedangkan perempuan lebih sensitif. Penelitian lain juga menunjukkan bahwa laki-laki lebih rileks dibanding perempuan. Menurut Kaplan dan Sadock perempuan mengalami gangguan ansietas dari pada laki-laki.

d. Dukungan sosial

Kondisi lingkungan sekitar dapat menyebabkan seseorang menjadi lebih kuat dalam menghadapi permasalahan, misalnya lingkungan

pekerjaan atau lingkungan bergaul yang tidak memberikan cerita negatif tentang efek negatif suatu permasalahan menyebabkan seseorang lebih kuat dalam menghadapi permasalahan, dukungan sosial dapat berupa pemberian informasi, pemberian bantuan, tingkah laku maupunmateri, yang didapat melalui hubungan sosial yang akrab yang membuat individu merasa diperhatikan, dicintai, dan bernilai sehingga mengurangi tingkat kecemasan. Menurut Apollo dukungan sosial tinggi akan mengalami hal-hal positif dalam hidupnya, mempunyai self esteem yang tinggi dan self concept yang lebih baik, serta kecemasan yang lebih rendah. orang-orang ini juga memiliki pandangan yang optimis terhadap kehidupan dan pekerjaannya, karena yakin akan kemampuannya, dibanding orang yang rendah dukungan sosialnya.

e. Kemampuan dalam berkomunikasi

Kemampuan dalam berkomunikasi sangat penting ketika berhubungan sosial. Menurut Lukmantoro (2017), menjelaskan bahwa ketidakmampuan remaja untuk berbicara di depan publik, sebenarnya, adalah akibat ketidakbiasaan mereka untuk tampil di depan publik. Penyelesaian untuk masalah ini adalah dengan melatih remaja untuk berbicara dan mengungkapkan perasaannya kepada keluarga dan teman sebaya dalam berbagai masalah.

f. Pola pikir

Faktor Menurut Salkind (2008), Pola pikir berpengaruh sangat kuat pada emosi yang memunculkan perilaku yang maladaptif. Jika seseorang

mengalami perasaan dan perilaku yang tidak diinginkan, penting untuk mengidentifikasi pemikiran yang menyebabkan perasaan atau perilaku dan belajar bagaimana cara mengganti pemikiran tersebut dengan pikiran - pikiran yang mengarah pada reaksi yang lebih diinginkan. Salah satu cara yang dapat digunakan untuk mengatasi pola pikir remaja adalah dengan menggunakan teknik self affirmation, melalui teknik self affirmation, pola pikir irrasional diubah melalui afirmasi positif yang dibuat dan dinyatakan secara berulang-ulang pada diri sendiri. Remaja secara pribadi mampu untuk melakukan pernyataan atau afirmasi diri secara positif dalam mengatasi masalah yang dihadapinya.

Menurut Mubarak,dkk (2015:444) faktor-faktor yang mempengaruhi kecemasan meliputi:

a. Faktor internal

1) Usia

Gangguan kecemasan lebih mudah dialami oleh individu yang mempunyai usia lebih muda dibandingkan individu dengan usia yang lebih tua.

2) Pengalaman

Individu yang mempunyai pengalaman menghadapi stres dan mempunyai cara menghadapinya akan cenderung lebih mudah untuk menyelesaikan permasalahan yang dihadapi. Setiap pengalaman merupakan sesuatu yang berharga, dari pengalaman menyelesaikan masalah dapat meningkatkan keterampilan menghadapi stress.

3) Aset fisik

Individu dengan aset fisik yang besar dan kuat akan menggunakan aset tersebut untuk mengatasi stres.

b. Faktor eksternal

1) Pengetahuan

Individu yang mempunyai ilmu pengetahuan dan kemampuan intelektual dapat meningkatkan kemampuan untuk menghadapi stress.

2) Pendidikan

Semakin tinggi pendidikan individu semakin mudah dan semakin mampu memecahkan masalah yang ada.

3) Finansial/Material

Aset berupa harta yang melimpah tidak akan menyababkan individu tersebut mengalami stres berupa kekacauan finansial dibandingkan dengan individu yang aset finansialnya terbatas.

4) Keluarga

Lingkungan kecil dimulai dari lingkungan keluarga, peran keluarga seperti memberi dukungan, memotivasi, memberi pengetahuan tentang covid-19 pada remaja akan mengurangi kecemasan dan ketakutan remaja terhadap covid-19.

5) Obat

Dalam bidang psikiatri dikenal obat-obatan yang tergolong dalam kelompok antiansietas. Obat-obat ini memiliki khasiat mengatasi ansietas sehingga penderita merasa tenang.

6) Dukungan sosial budaya

Dukungan sosial dan masyarakat serta lingkungan sekitar individu akan sangat membantu individu dalam menghadapi stres, pemecahan masalah bersama-sama dan tukar pendapat dengan orang disekitarnya akan membuat individu lebih siap menghadapi stres yang akan datang.

2.3.2 Faktor-faktor Penyebab Kecemasan Saat Pandemi COVID-19

Kecemasan itu akibat ketidaktahuan dalam menghadapi sesuatu yang baru (dalam hal ini: virus Corona). Covid-19 menimbulkan berbagai macam reaksi bersamaan dengan kemunculannya, karena banyak hal baru yang sebenarnya tidak pernah terpikirkan dan itu menimbulkan kecemasan tersendiri. Masalah tersebut muncul karena terjadinya perubahan sistem secara tiba-tiba akibat merebaknya virus Corona sehingga seseorang harus menyesuaikan secara mendadak terhadap perubahan pola, yakni dari kondisi normal menjadi kecemasan. Djiemi (2020), mengatakan kecemasan tersebut merupakan akibat dari:

a. Isolasi Sosial, Kurangnya Interaksi dan Gerakan Fisik yang Terbatas

Jika emosi tersebut mengambil alih pikiran, perasaan dan perilaku hingga merasakan penderitaan dan ketidakmampuan melakukan fungsi keseharian, maka mungkin itu bisa menjadi tanda terjadi gangguan mental dan perlu mendapatkan bantuan.

b. Faktor psikologi

Seperti pola stresor yang berubah, cara menghadapi stresor, gaya berpikir seseorang, dan kemampuannya dalam beradaptasi, serta faktor sosial seperti sistem pendukung orang-orang dekat yang berada di sekitar.

Menurut (Linda dan Ifdil, 2020) beberapa faktor yang menyebabkan anxiety pada masa pandemic COVID-19 adalah kurangnya informasi mengenai kondisi ini, pemberitaan yang terlalu heboh di media masa ataupun media sosial, kurangnya membaca literasi terkait dengan penyebaran dan mengantisipasi penularan corona virus.

2.4 COVID-19

2.4.1 Definisi COVID-19

Diawal tahun 2020, dunia digemparkan dengan merebaknya virus baru yaitu coronavirus jenis baru (SARS-CoV-2) dan penyakitnya disebut Coronavirus disease 2019 (COVID-19). Diketahui, asal mula virus ini berasal dari wuhan, Tiongkok. Ditemukan pada akhir Desember tahun 2019. Sampai saat ini sudah dipastikan terdapat 65 negara yang telah terjangkit virus ini (Data WHO, 1 Maret 2020) (PDPI,2020). *Coronavirus Disease 2019* (Covid-19) adalah suatu kondisi infeksi yang dapat menyebar secara langsung atau tidak langsung dari satu orang ke orang lain dan menyebabkan penyakit pernapasan, mulai dari flu biasa hingga sindrom pernapasan akut (Chen et al., 2020).

2.4.2 Manifestasi Klinis

Infeksi COVID-19 dapat menimbulkan gejala ringan, sedang dan berat. Gejala klinis utama yang muncul yaitu demam (suhu >38°C), batuk dan kesulitan bernapas. Selain itu dapat disertai dengan sesak memberat, fatigue, mialgia, gejala gastrointestinal seperti diare dan gejala saluran napas lain. Setengah dari pasien timbul sesak dalam satu minggu. Pada kasus berat perburukan secara cepat dan progresif, seperti ARDS, syok septik, asidosis metabolik yang sulit dikoreksi dan perdarahan atau disfungsi sistem koagulasi dalam beberapa hari. Pada beberapa pasien, gejala yang muncul ringan, bahkan tidak disertai dengan demam. Kebanyakan pasien memiliki prognosis baik, dengan sebagian kecil dalam kondisi kritis bahkan meninggal (PDPI, 2020)

Berikut sindrom klinis yang dapat muncul jika terinfeksi (PDPI, 2020)

a. Tidak berkomplikasi

Kondisi ini merupakan kondisi teringan. Gejala yang muncul berupa gejala yang tidak spesifik. Gejala utama tetap muncul seperti demam, batuk dan dapat disertai dengan nyeri tenggorokan, kongesti hidung, malaise, sakit kepala, dan nyeri otot. Perlu diperhatikan bahwa pada pasien dengan lanjut usia dan pasien immunocompromises presentasi gejala menjadi tidak khas atau atipikal. Selain itu, pada beberapa kasus ditemui tidak disertai dengan demam dan gejala relatif ringan. Pada kondisi ini pasien tidak memiliki gejala komplikasi diantaranya dehidrasi,sepsis atau napas pendek.

b. Pneumonia ringan

Gejala utama dapat muncul seperti demam, batuk dan sesak. Namun tidak ada tanda pneumonia berat. Pada anak-anak dengan pneumonia tidak berat ditandai dengan batuk atau susah bernapas.

c. Pneumonia berat pada pasien dewasa

Gejala yang muncul diantaranya demam dan curiga infeksi saluran napas. Tanda yang muncul yaitu takipnea (frekuensi napas:>30x/menit), distres pernapasan berat atau saturasi oksigen pasien <90%.

2.4.3 CaraPenularan COVID-19

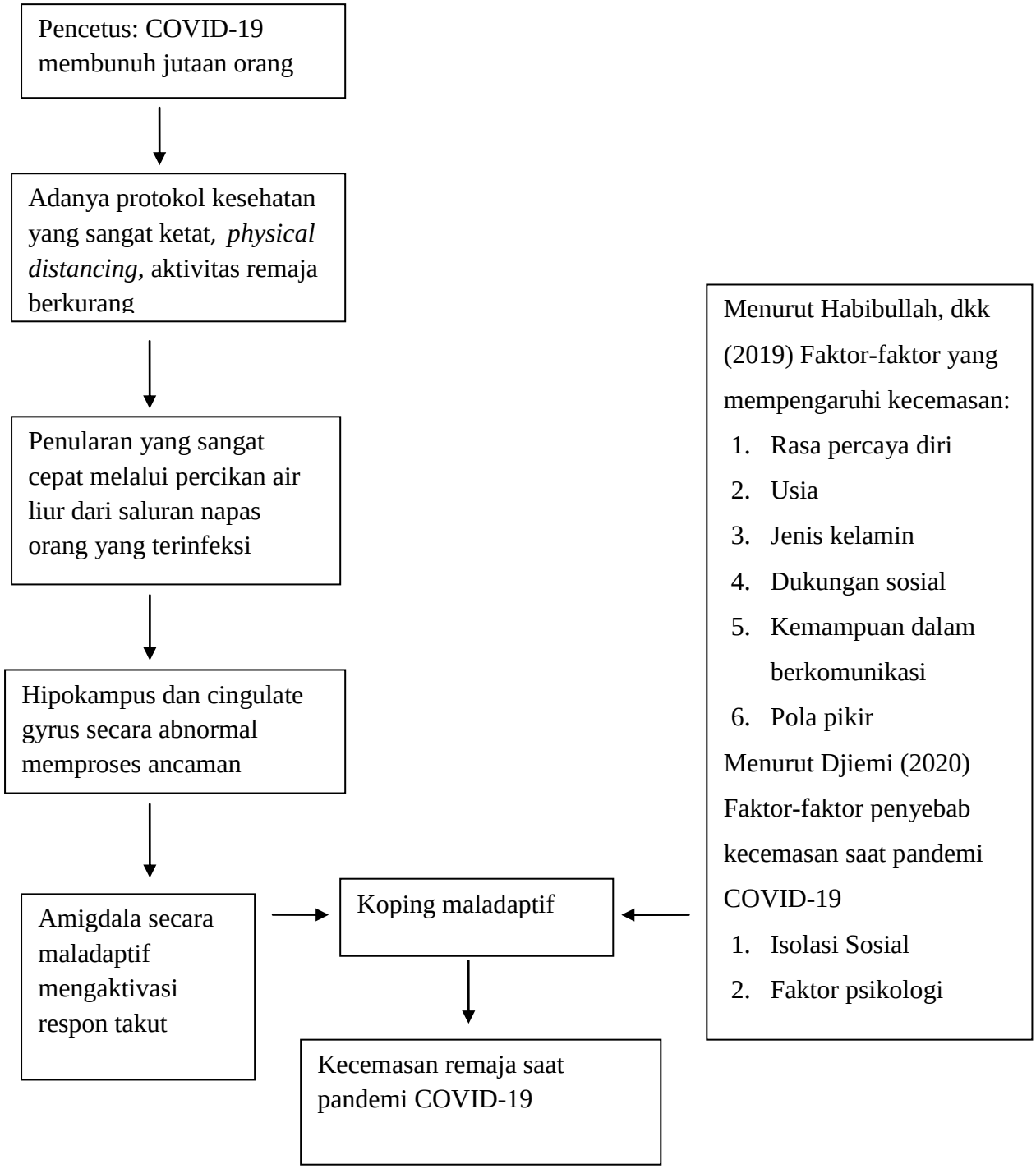
Virus ini ditularkan melalui percikan air liur dari saluran napas orang yang terinfeksi (yang keluar melalui batuk dan bersin), kontak langsung dengan orang yang terinfeksi virus corona, menyentuh permukaan yang terkontaminasi virus ini lalu menyentuh wajahnya (misalnya mata, hidung, mulut), tinja atau feses (jarang terjadi) (Bender, dkk, 2020).

2.4.4 Cara Pencegahan COVID-19

Sampai saat ini, belum ada vaksin untuk mencegah infeksi virus Corona atau Covid-19, karena itu cara pencegahan yang terbaik adalah dengan menghindari faktor-faktor yang bisa menyebabkan kita terinfeksi virus ini, yaitu dengan menerapkan *social distancing* dan *physical distancing*, yaitu menjaga jarak minimal 1 meter dari orang lain, dan jangan dulu ke luar rumah kecuali ada keperluan mendesak, menggunakan masker saat beraktivitas di tempat umum atau keramaian, termasuk saat

pergi berbelanja bahan makanan, rutin mencuci tangan dengan air yang mengalir dan sabun atau hand sanitizer yang mengandung alkohol minimal 70%, terutama setelah beraktivitas di luar rumah atau di tempat umum, jangan menyentuh mata, mulut, dan hidung sebelum mencuci tangan, tingkatkan daya tahan tubuh dengan pola hidup sehat, seperti mengonsumsi makanan bergizi, berolahraga secara rutin, beristirahat yang cukup dan mencegah stres, tutup mulut dan hidung dengan tisu saat batuk atau bersin, kemudian buang tisu ke tempat sampah, jaga kebersihan benda yang sering disentuh dan kebersihan lingkungan, termasuk kebersihan rumah, hindari kontak dengan penderita Covid-19, orang yang dicurigai positif terinfeksi virus Corona, atau orang yang sedang sakit demam, batuk atau pilek (Kemenkes RI, 2020).

2.5 Kerangka Teori



Gambar 2.2 Kerangka TeoriFaktor-Faktor Yang Berhubungan Dengan Kecemasan Remaja Saat Pandemi Covid-19

BAB III

METODE PENELITIAN

3.1 Strategi Pencarian *Literature*

3.1.1 Protokol dan Registrasi (Kerangka Kerja)

Protokol penelitian adalah pedoman peneliti dalam melakukan penelitiannya (Al Jundi & Sakka dalam Widiasih dkk., 2020). Protokol penelitian dibutuhkan untuk transparansi basis literatur dalam penelitian ilmiah dan mencegah penggunaan sumber-sumber yang tidak berkualitas (Rajmohan dkk, dalam Widiasih dkk., 2020). Penelitian berbasis *literature review* ini mengenai faktor-faktor yang berhubungan dengan kecemasan remaja saat pandemi COVID-19. Protokol dan evaluasi dari *literature review* akan menggunakan pedoman *Preferred Reporting Items for Systematic Reviews and Meta-Analyses* (PRISMA) *checklist.* Pedoman ini mengidentifikasi jumlah literatur secara detail dari hasil pencarian, proses penyaringan, jumlah penelitian yang memenuhi kriteria kelayakan dan jumlah penelitian yang akan diikutsertakan untuk tinjauan menyeluruh (Widiasih dkk., 2020).

3.1.2 *Database* Pencarian

Pencarian literatur dilakukan pada bulan September sampai Desember 2020. Sumber data yang digunakan adalah data sekunder, dimana sumber data yang tidak langsung memberikan data pada peneliti. Data sekunder merupakan data yang sifatnya mendukung keperluan data primer seperti buku-buku dan literatur yang berkaitan untuk menunjang

penelitian (Sugiyono, 2017). Sumber data diperoleh pada *database Google Scholar* dan *Pubmed.*

3.1.3 Kata Kunci

Penelitian ini memiliki kata kunci yang sangat luas, oleh sebab itu peneliti menggunakan Boolean "*AND*" untuk mempersempit hasil pencarian sehingga didapatkan artikel atau jurnal yang spesifik. Boolean "*OR*" digunakan untuk mempeluas hasil pencarian artikel atau jurnal. Kata kunci yang digunakan yaitu "Faktor-faktor", "Kecemasan", atau "*Anxiety*", "Remaja", "*Adolescent*" atau "*Teenager*" dan "COVID-19'. Kata kunci ini disesuaikan dengan *Medical Subject Heading (MeSH)* sebagai berikut:

Tabel 3.1 Kata Kunci *Literatur Review*

Faktor	**Kecemasan**	**Remaja**	**COVID-19**
Faktor-faktor	Kecemasan	Remaja	COVID-19
OR	*OR*	*OR*	*OR*
Faktor resiko	*Anxiety*	*Adolescent*	SARS-COV-2
OR		*OR*	
Risk faktors		*Teenager*	

3.2 Kriteria Inklusi dan Eksklusi

Strategi yang digunakan dalam mengkritisi atau telaah jurnal menggunakan prinsip PICOS, yaitu terdiri dari:

1) *Population/Problem* merupakan populasi atau masalah klinis yang akan dianalisis sesuai dengan tema dalam *literature review*.

2) *Intervention* merupakan strategi manajemen atau tindakan penatalaksanaan yang berhubungna dengan masalah klinis.
3) *Comparation* merupakan alternatif atau strategi kontrol atau tes sebagai pembanding.
4) *Outcome* merupakan hasil yang diperoleh dari studi terdahulu
5) *Study design* merupakan desain penelitian yang digunakan dalam jurnal-jurnal yang akan di review.

Tabel 3.2 Kriteria Inklusi dan Ekslusi Literatur Review Faktor-faktor kecemasan remaja saat pandemi COVID-19

PICOS	Kriteria Inklusi	Kriteria Ekslusi
Population	Remajausia 10-24 tahun dan belum menikah (Kemenkes RI, 2014).	Selain remaja
Intervention	Tidak ada intervensi	Tidak ada intervensi
Comparation	Tidak ada faktor pembanding	Tidak ada faktor pembanding
Outcome	Adanya faktor yang berhubungan dengan kecemasan remaja saat pandemi COVID-19	-
Study Design	Kuantitatif korelasional dengan pendekatan *cross sectional.*	Kualitatif
Publication Years	Tahun 2019 – 2021	-
Language	Indonesia dan Inggris	Bahasa selain Inggris dan Indonesia

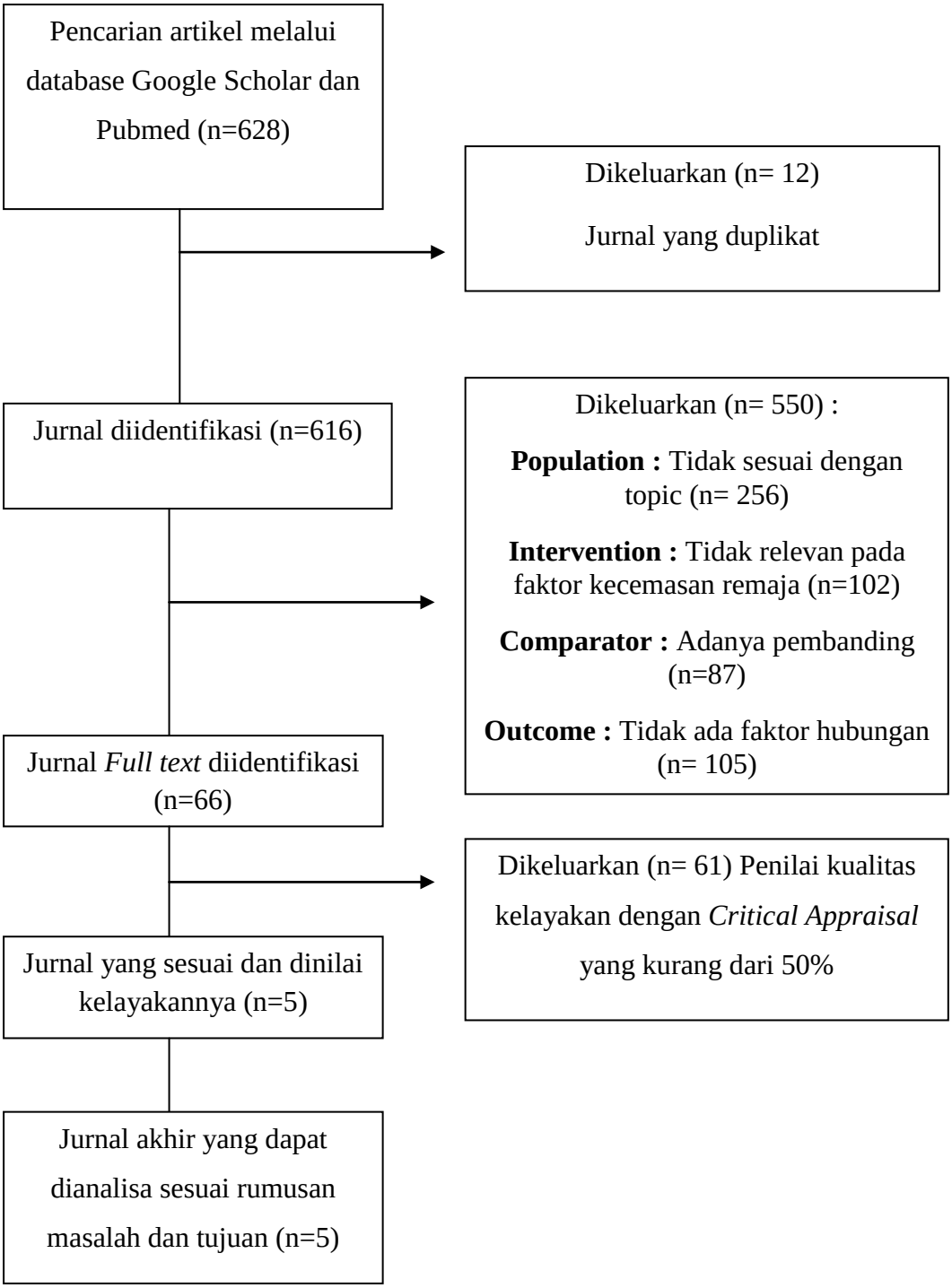
3.3 Seleksi Studi dan Penilaian Kualitas

Analisis kualitas metodologi dalam setiap studi (n= 5) menggunakan *critical appraisal The Joanna Briggs Institute* (JBI)

Checklist for Analytical Cross Sectional Studies. Penilaian kriteria disesuaikan dengan JBI, yaitu "*Yes*", "*No*", "*Unclear*", "*No Applicable*", dan setiap kriteria dengan skor "*Yes*" diberi satu poin dan skor untuk kriteria lainnya adalah nol. Jika skor penelitian setidaknya 50% memenuhi kriteria *critical appraisal,* maka studi dimasukkan ke dalam kriteria inklusi. *Critical appraisal* merupakan sebuah proses yang terstruktur untuk menentukan kekuatan dan keterbatasan dari suatu penelitian dalam jurnal, serta menentukan relevansi dengan tujuan khusus penelitian (Aveyerd dalam Rumahorbo dkk., 2020). Dari penilaian tersebut diperoleh lima artikel yang memenuhi kriteria.

3.3.1 Hasil Pencarian dan Seleksi Studi

Berdasarkan hasil pencarian literatur melalui *database Google Scholar dan Pubmed* dan menggunakan kata kunci peneliti mendapatkan 471 artikel di *Google Scholar* dan 157 artikel di *Pubmed,* Hasil pencarian yang sudah didapatkan kemudian diperiksa duplikasi, ditemukan terdapat 12 artikel yang sama sehingga dikeluarkan dan tersisa 616 artikel. Diskrining kembali sesuai dengan PICOS mendapatkan 66 artikel, kemudian dilakukan penilaian *critical appraisal* menggunakan JBI yangmemenuhi kriteria diatas 50% didapatkan 5 artikel. Penilaian yang dilakukan berdasarkan kelayakan terhadap kriteria inklusi dan eksklusi didapatkan sebanyak 5 artikel yang bisa dipergunakan dalam *literature review*. Hasil seleksi artikel studi dapat digambarkan dalam Diagram Alur.



Gambar 3.3 Diagram Alur *literature review* berdasarkan PRISMA 2009 (Polit and Beck dalam Nursalam, 2020)

3.4 Rencana Analisa Data

Data akan dianalisis menggunakan analisa deskriptif, yang meliputi nama author, tahun terbit, nama jurnal, judul dan metode yang digunakan dalam jurnal berfokus pada hasil dan kesimpulan sesuai dengan tujuan penelitian sebagai berikut, yaitu "Hubungan tingkat pengetahuan dengan tingkat kecemasan terhadap COVID-19 pada remaja di SMA Adven Balikpapan"oleh Gheralyn Regina Suwandi dan Evelin Malinti pada Jurnal Manuju: Malahayati Nursing Journal Vol 2 No 4 September 2020 dengan pendekatan *cross sectional*, "Kecemasan remaja pada masa pandemi COVID-19" oleh Linda fitria dan Ifdil Ifdil pada Jurnal Educatio Vol.6 No.1 2020 dengan pendekatan *cross sectional*, "*Factors affecting the anxiety levels of adolescents in home-quarantine during COVID-19 in Turkey*" oleh Senai Kilincel M.D dkk, pada Jurnal Asia Pacifik Psychiatry 2020 dengan pendekatan *cross sectional*, "*Prevalance and risk faktors for anxiety symptoms during the outbreak of COVID-19: A large survey among 373216 junior and senior high school students in china*" olehQingqing Xu dkk, pada Jurnal Affective Disorders 2021dengan pendekatan *cross sectional*, "*Risk and protective factors for prospective changes in adolescent mental health during the COVID-19 pandemic*" oleh Natasha R. Magsondkk, pada Journal of Youth and Adolescence2020 dengan pendekatan *cross sectional.*

BAB IV

HASIL DAN ANALISIS

4.1 Hasil

4.1.1 Karakteristik Studi

Artikel yang didapatkan penulis untuk dijadikan sebagai *literature review* sebanyak 5 artikel yang memenuhi kriteria inklusi dan terdiri dari 3 artikel Internasional dan 2 artikel nasional yang diambil dari *database Google Scholar, Science Direct dan Pubmed*. Dari kelima artikel semua diambil dari metodologi penelitian yang sama yaitu penelitian kuantitatif dengan pendekatan *cross sectional*. Secara keseluruhan, semua penelitian membahas tentang faktor-faktor kecemasan remaja saat pandemi COVID-19. Semua artikel yang diambil mempunyai rentang tahun publikasi antara 2020-2021, dibawah ini merupakan tabel hasil penelusuran artikel:

4.1.2 Hasil Pencarian Artikel

Tabel 4.1 Hasil Pencarian Artikel

No	Author	Nama Artikel, Tahun, Volume, Angka	Judul	Tujuan Peneliti dalam Artikel	Metode (design, sample, variable, instrumen, Analisis)	Hasil Penelitian	Kaitan Hasil Artikel dengan Tujuan Khusus	Database
1.	1. Linda Fitria 2. Ifdil Ifdil	Jurnal EDUCATIO (Jurnal Pendidikan Indonesia),Vol. 6, No. 1, 2020	Kecemasan remaja pada masa pandemi Covid -19	Tujuan penelitian ini untuk menganalisis tingkat kecemasan yang dialami oleh remaja di masa pandemi covid-19	D: Penelitian kuantitatif dengan rancangan *cross sectional study* S: *Purposive Random Sampling* V: Kecemasan remaja pada masa pandemi Covid -19 I: Skala kecemasan remaja A: Deskriptif	Hasil penelitian menyatakan bahwa tingkat kecemasan remaja pada masa pandemi covid-19 berada pada kategori rendah sebesar 2,1%, kategori sedang 43,9% dan kategori tinggi 54%.	Kecemasan	*Google Scholar*
2.	1. Gheralyn Regina Suwandi 2. Evelin Malinti	Manuju: Malahayati Nursing Journal, Volume 2, Nomor 4 September 2020	Hubungan Tingkat Pengetahuan Dengan Tingkat Kecemasan Terhadap Covid-19	Tujuan penelitian ini untuk mengetahui hubungan antara tingkat pengetahuan dengan	D: Deskriptif analitik S:*Total sampling* V:Tingkat pengetahuan dan tingkat kecemasan I: Kuesioner	Hasil penelitian menyatakan bahwa 33 siswa (55%) dengan tingkat pengetahuan baik mengalami kecemasan ringan. 4 siswa (6,7%) dengan pengetahuan baik	Pengetahuan dan Kecemasan	*Google Scholar*

			Pada Remaja Di SMA Advent Balikpapan	tingkat kecemasan pada remaja terhadap pandemi Covid-19	A: Uji *chi square*	mengalami kecemasan berat. Sedangkan 9 siswa (15%) yang memiliki pengetahuan cukup justru mengalami kecemasan ringan. Berdasarkan hasil uji statistic *chi square* diperoleh *p-value* = 0,135 atau > 0,05 yang menandadakan tidak terdapat hubungan yang signifikan antara tingkat pengetahuan dengan tingkat kecemasan terhadap Covid-19 pada remaja kelas XII di SMA Advent Balikpapan.		
3.	1. Senay Kılıncel M.D. 2. Oguzhan Kılıncel M.D. 3. Gurkan Muratdagi M.D. 4. Abdulkadir Aydin	Asia Pac Psychiatry. 2020;e12406.	*Factors affecting the anxiety levels of adolescents in home quarantine during COVID-19 pandemic in Turkey*	Tujuan penelitian ini untuk mengetahui faktor-faktor yang mempengaruhi kecemasan remaja selama karantina di	D: Penelitian kuantitatif dengan rancangan *cross sectional study* S: *Purposive Random Sampling* V: Keefektifan karantina selama pandemi dan faktor-faktor	Hasil penelitian menyatakan bahwa sebanyak 88,2% remaja mengalami kecemasan. Sumber informasi remaja dari televisi sebanyak 48,7%, dari media sosial 35,0%, dari internet selain dari	Pengetahuan	*Pubmed*

	M.D. 5. Mirac Baris¸ Usta M.D., PhD			rumah saat pandemi COVID-19	yang mempengaruhi I: Kuesioner A: Analisis korelasi dan regresi logistik	media sosial (pencarian Google, situs berita, dll) 12,2%, dari orang lain 2,1%. Hasil *p-value* = 0,022 atau < 0,05 yang menandadakan terdapat hubungan yang signifikan		
4.	1. Qingqing Xu 2. Zhenxing Mao 3. Dandan Wei 4. Pengling Liu 5. Keliang Fan 6. Juan Wang 7. Xian Wang 8. Xiaomin Lou 9. Hualiang Lin 10. Chongjian Wang 11. Cuiping Wu	Journal of Affective Disorders 288 (2021) 17–22	*Prevalence and risk factors for anxiety symptoms during the outbreak of COVID-19: A large survey among 373216 junior and senior high school students in China*	Tujuan penelitian ini untuk mengetahui prevalensi gejala kecemasan dan faktor yang berhubungan dengan kecemasan saat pandemi COVID-19 pada siswa SMP dan SMA	D: Penelitian kuantitatif dengan rancangan *cross sectional study* S: Cluster sampling V: Faktor usia, jenis kelamin, kelas sosial, lokasi tempat tinggal, tingkat kognitif , tingkat kekhawatiran, tingkat ketakutan, dan status perilaku I: Kuesioner A: Uji *student t-test* dan *chi-square*.	Hasil penelitian menyatakan bahwa sebanyak 36918 remaja mengalami kecemasan saat pandemi COVID-19. Remaja laki-laki sebanyak 52.99 % sedangkan perempuann sebanyak 47,01%. Siswa SMP (13-15 tahun), sebanyak 71,15% sedangkan siswa SMA (16-18 tahun), sebanyak 28,25%. Hasil *p-value* = 0,001 atau < 0,05 yang menandadakan terdapat hubungan yang signifikan	Usia, Jenis Kelamin, Kecemasan	*Science Direct*

5.	1. Natasha R. Magson 2. Justin Y. A. Freeman 3. Ronald M. Rapee 4. Cele E. Richardson 5. Ella L. Oar 6. Jasmine Fardouly1	Journal of Youth and Adolescence https://doi.org/10. 1007/s10964-020-01332-9 2020.	*Risk and Protective Factors for Prospective Changes in Adolescent Mental Health during the COVID-19 Pandemic*	Tujuan penelitian ini untuk mengetahui dampak pandemi COVID-19 terhadap kesehatan mental remaja, dan faktor-faktor yang dianggap sebagai penyebab paling tertekan.	D: Penelitian kuantitatif dengan rancangan *cross sectional study* S: Cluster sampling V: Kekhawatiran terkait COVID-19, kesulitan dengan pembelajaran online, konflik keluarga, paparan media sosial, kepatuhan terhadap pembatasan pemerintah, dan perasaan terhubung secara sosial dengan orang. I: Kuesioner A: Analisis korelasi bivariat	Hasil penelitian menyatakan bahwa sebanyak 5,26% remaja mengalami kecemasaat saat pandemi COVID-19. Hubungan sosial remaja sebelum pandemi yaitu 10,27 sedangkan saat pandemi yaitu 0,040. Hasil *p-value* = 0,001 atau < 0,05 yang menandadakan terdapat hubungan yang signifikan	Hubungan sosial	*Pubmed*

4.2 Faktor-faktor kecemasan remaja saat pandemi COVID-19

4.2.1 Faktor usia remaja yang mengalami kecemasan

Tabel 4.2 Faktor usia remaja yang mengalami kecemasan

No.	Peneliti	Tahun Penelitian	Usia Remaja	Jumlah	Persen (%)
1.	Qingqing Xu, dkk	2021	SMP (13-15 tahun)	26490	71,15%
			SMA (16-18 tahun)	10428	28,25%

Hasil analisis dari 5 artikel yang dianalisis, dari faktor usia remaja ditemukan sebanyak 1 artikel yang menyatakan bahwa usia yang lebih muda lebih rentan mengalami kecemasan. Penelitian yang dilakukan oleh (Qingqing Xu, dkk) menyatakan bahwa prevalensi kecemasan pada siswa SMP (13-15 tahun), (71,15%) lebih tinggi dari pada siswa SMA (16-18 tahun), (28,25%).

4.2.2 Faktor jenis kelamin remaja yang mengalami kecemasan

Tabel 4.3 Faktor jenis kelamin remaja yang mengalami kecemasan

No.	Peneliti	Tahun Penelitian	Jenis kelamin	Jumlah	Persen (%)
1.	Qingqing Xu, dkk	2020	Laki-laki	19564	52.99 %
			Perempuan	17354	47.01 %

Hasil analisis dari 5 artikel yang dianalisis, dari faktor jenis kelamin remaja ditemukan sebanyak 1 artikel yang menyatakan bahwa pada masa pandemi COVID-19 remaja laki-laki lebih banyak mengalami kecemasan dibandingkan perempuan, yaitu siswa laki-laki sebanyak (52,99%), sedangkan remaja perempuan sebanyak (47,01%) (Qingqing Xu, dkk, 2021).

4.2.3 Faktor pengetahuan remaja yang mengalami kecemasan

Tabel 4.4 Faktor pengetahuan remaja yang mengalami kecemasan

No.	Sumber Informasi	Jumlah (N)	Persen (%)
1.	Televisi	363	48,7%
2.	Media sosial	261	35,0%
3.	Internet selain dari media sosial (pencarian Google, situs berita, dll)	91	12,2%
4.	Orang lain	16	2,1%
5.	Tidak mengikuti perkembangan COVID-19 dari sumber manapun	14	1,9%

Hasil analisis dari 5 artikel yang dianalisis, dari faktor pengetahuan remaja tentang COVID-19 ditemukan sebanyak 2 artikel yang menyatakan bahwa sebanyak 88,2% remaja mengalami kecemasan karena mengikuti perkembangan COVID-19 dan informasi yang diperoleh kebanyakan dari televisi (Senay Kılıncel M.D, dkk, 2020). Sedangkan satu artikel menyatakan tingkat pengetahuan baik mengalami kecemasan ringan. Namun 4 siswa (6,7%) dengan pengetahuan baik mengalami

kecemasan berat. Sedangkan 9 siswa (15%) yang memiliki pengetahuan cukup justru mengalami kecemasan ringan.

4.2.4 Faktor hubungan sosial remaja yang mengalami kecemasan

Tabel 4.5 Faktor hubungan sosial remaja yang mengalami kecemasan

No.	Peneliti	Tahun Penelitian	Hubungan Sosial Remaja	Jumlah
1.	Natasha R. Magson, dkk	2020	Sebelum pandemi COVID-19	10,27
			Saat pandemi COVID-19	0,040

Hasil analisis dari 5 artikel yang dianalisis, dari faktor pengetahuan remaja tentang COVID-19 ditemukan sebanyak 1 artikel yang menyatakan bahwa, sebanyak 5,26% remaja mengalami kecemasaat saat pandemi COVID-19. Hubungan sosial remaja sebelum pandemi yaitu 10,27 sedangkan saat pandemi yaitu 0,040. Merasa terhubung secara sosial selama masa karantina secara signifikan memoderasi perubahan kecemasan. Mereka yang tingkat koneksi sosialnya tinggi selama COVID-19 dilaporkan secara signifikan lebih sedikit gejala kecemasan (Natasha R. Magson, dkk).

4.3 Identifikasi Kecemasan remaja saat pandemi COVID-19

Tabel 4.6 Kecemasan remaja saat pandemi COVID-19

No.	Peneliti	Tahun Penelitian	Tingkat Kemasan	Persen (%)
1.	Linda Fitria & Ifdil	2020	Ringan	2,1 %
			Sedang	43,9 %
			Berat	54 %
2.	Gheralyn & Evelin	2020	Ringan	70,1 %
			Sedang	21,6 %
			Berat	8,3%
3.	Senay Kılıncel M.D, dkk	2020	Ringan	21,3 %
			Sedang	2,7 %
			Berat	0,9 %
4.	Qingqing Xu, dkk	2021	Ringan	28,53 %
			Sedang	6,79 %
			Berat	3,10 %
5.	Natasha R. Magson, dkk	2020	Ringan	
			Sedang	5,10 %
			Berat	

Hasil analisis dari 5 artikel tentang faktor kecemasan remaja saat pandemi COVID-19 yang telah diperoleh didapatkan hasil, Pada artikel 1 kecemasan remaja berada pada kategori ringan sebesar 2,1%, kategori sedang 43,9% dan kategori berat 54% (Linda Fitria & Ifdil, 2020). Pada artikel 2 kecemasan remaja berada pada kategori ringan sebesar 70,1%, kategori sedang 21,6% dan kategori berat8,3% (Gheralyn & Evelin, 2020. Pada artikel 3 kecemasan remaja berada pada kategori ringan sebesar 21,3%, kategori sedang 2,7% dan kategori berat 0,9%. Pada artikel 4

kecemasan remaja berada pada kategori ringan sebesar 28,53%, kategori sedang 6,79% dan kategori berat 3,10%. Pada artikel 5 remaja yang mengalami kecemasan sebanyak 5,10%. Dari 5 artikel yang di analisis tingkat kecemasan remaja sebagian besar ringan sampai sedang.

BAB V

PEMBAHASAN

5.1 Identifikasi faktor usia remaja yang mengalami kecemasan

Berdasarkan hasil penelitian dari 5 artikel tentang faktor kecemasan remaja saat pandemi COVID-19 yang telah diperoleh didapatkan hasil bahwa usia yang muda lebih rentan mengalami kecemasan. Habibullah, dkk (2019) seseorang yang mempunyai usia lebih muda ternyata lebih mudah mengalami gangguan kecemasan dari pada seseorang yang lebih tua, tetapi ada juga yang berpendapat sebaliknya terhitung mulai saat dilahirkan sampai saat berulang tahun. Semakin cukup umur, tingkat kematangan dan kekuatan sesorang akan lebih matang dalam berfikir dan bekerja. Dari segi kepercayaan masyarakat seseorang yang lebih di percaya dari orang yang belum cukup tinggi kedewasaannya. Hal ini sebagai akibat dari pengalaman dan kematangan jiwanya. Usia menunjukkan ukuran waktu pertumbuhan dan perkembangan seorang individu.

Untuk mengatasi kecemasan pada remaja ini peran orangtua sangat dibutuhkan (Fuad& Budiyono, 2012), yaitu memberikan pengetahuan tentang COVID-19 pada remaja khususnya remaja awal. Pengetahuan yang diperoleh dari orangtua mampu mengurangi kecemasan remaja dalam menghadapi perubahan-perubahan yang terjadi (Mukhoirotin, 2016). Karena keluarga adalah unit kelompok terkecil pertama yang dikenal dan dipercayai oleh remaja, sehingga peran orangtua dalam meningkatan

pengetahuan remaja sangat penting (Rochmania, 2017). Selain orangtua, remaja juga dapat menemukan sumber informasi dari tenaga kesehatan, yaitu melalui pendidikan kesehatan. Pendidikan kesehatan yang dilakukan di sekolah merupakan upaya paling efektif di antara unit masyarakat yang lain (Nadeak et al.,2014).

Peneliti berasumsi bahwa seseorang yang mempunyai usia lebih muda lebih mudah mengalami gangguan kecemasan dari pada seseorang yang lebih tua. Hasil penelitian juga menunjukkan prevalensi kecemasan secara signifikan lebih tinggi dialami oleh siswa SMP dari pada siswa SMA. Usia siswa SMP berkisaran antara 13-15 tahun, pada anak remaja yang berusia 13-14 tahun kecemasan akan meningkat karena pada masa ini adalah masa peralihan dari masa anak-anak ke masa remaja, dimana akan terjadi perubahan hormonal yang menyebabkan rasa tidak tenang pada diri remaja dan mudah mengalami kecemasan.

5.2 Identifikasi faktor jenis kelamin remaja yang mengalami kecemasan

Berdasarkan hasil penelitian dari 5 artikel tentang faktor kecemasan remaja saat pandemi COVID-19 didapatkan hasil bahwa pada masa pandemi COVID-19 remaja laki-laki lebih banyak mengalami kecemasan. Habibullah, dkk (2019) mengatakan perempuan lebih cemas dibanding laki-laki. Laki-laki lebih aktif, eksploratif, sedangkan perempuan lebih sensitif. Penelitian lain juga menunjukkan bahwa laki-laki lebih rileks dibanding perempuan. Menurut Kaplan dan Sadock perempuan mengalami gangguan ansietas dari pada laki-laki. Saputri et al.,

(2016) mengatakan mental laki-laki dalam menghadapi situasi yang mengancam dirinya lebih kuat dibandingkan perempuan.

Peneliti berasumsi bahwa pada situasi pandemi COVID-19 ini juga dapat menimbulkan kecemasan berat pada remaja laki-laki. Hasil penelitan menunjukkan remaja laki-laki lebih banyak mengalami kecemasan dibandingkan perempuan. Sedangkan teori mengatakan perempuan lebih cemas dibandingkan laki-laki. Hal ini terjadi karena ada faktor lain diluar jenis kelamin yaitu faktor perbedaan tingkat status sosial ekonomi orang tua, pengetahuan dan sumber informasi yang mempengaruhi kecemasan.

5.3 Identifikasi faktor pengetahuan remaja yang mengalami kecemasan

Berdasarkan hasil penelitian dari 5 artikel tentang faktor kecemasan remaja saat pandemi COVID-19 yang telah diperoleh didapatkan hasil bahwa pengetahuan remaja tentang COVID-19 mempengaruhi kecemasan remaja saat pandemi COVID-19. Kecemasan dipicu oleh berbagai macam faktor, salah satunya ialah pengetahuan. Pengetahuan merupakan dasar dari tindakan seseorang, sehingga menstimulus seseorang untuk melakukan sesuatu (Utami, 2019, p. 4).

Pengetahuan dapat diperoleh dari berbagai sumber, salah satunya orangtua. Pengetahuan yang diperoleh dari orangtua mampu mengurangi kecemasan remaja dalam menghadapi perubahan-perubahan yang terjadi (Mukhoirotin, 2016). Remaja adalah individu yang mampu menangkap informasi dengan cepat, namun cara yang digunakan dalam menangkap informasi tersebut berbeda-beda. Sehingga perlu diketahui cara apa yang

paling tepat yang dapat memaksimalkan remaja dalam memperoleh pengetahuan (Natalia et al., 2020).

Peneliti berasumsi bahwa pada situasi pandemi COVID-19 ini informasi yang diberikan kepada remaja harus dipastikan merupakan informasi yang tepat, karena informasi yang tidak tepat dapat menimbulkan kecemasan dan stres. Wabah Covid-19 yang saat ini menjadi topik pembahasan utama di seluruh dunia menyebabkan munculnya ribuan tulisan dan pemberitaan tentang Covid-19 di berita dan internet setiap harinya. Namun tidak semua informasi tersebut benar, banyak kabar yang simpang siur yang dapat menambah kekhawatiran dan kecemasan remaja yang membaca dan mendengarnya.

5.4 Identifikasi faktor hubungan sosial remaja yang mengalami kecemasan

Berdasarkan hasil penelitian dari 5 artikel tentang faktor kecemasan remaja saat pandemi COVID-19 yang telah diperoleh didapatkan hasil, merasa terhubung secara sosial selama masa karantina secara signifikan memoderasi perubahan kecemasan. Mereka yang tingkat koneksi sosialnya tinggi selama COVID-19 dilaporkan secara signifikan lebih sedikit gejala kecemasan dari pada mereka merasa terputus secara sosial selama masa karantina.

Mengacu instruksi Organisasi Kesehatan Dunia (WHO), Virus corona sangat mudah menular melalui tetesan atau percikan kecil air yang dikeluarkan seseorang saat bersin ataupun batuk. Maka social distancing atau pembatasan sosial, dalam Pedoman Penanganan Cepat Medis dan

Kesehatan Masyarakat COVID-19 di Indonesia, adalah pembatasan kegiatan tertentu penduduk dalam suatu wilayah. Hal ini ditujukan pada semua orang di wilayah yang diduga terjangkit virus corona. Penyebaran virus corona menjadi ancaman serius bagi dunia. Semakin meningkatnya pasien yang terkena virus corona, social distancing ini mengarahkan masyarakat mengurangi interaksi sosialnya dalam menghadapi pandemic Covid-19.

Pengurangan interaksi sosial melalui social distancing guna pencegahan penyebaran virus corona yang lebih meluas ini dengan cara masyarakat pembatasan penggunaan fasilitas umum dan menjaga jarak interaksi. Masyarakat diminta untuk berdiam di rumah dengan melakukan belajar dari rumah bagi pelajar, bekerja dari rumah (Work From Home/WFH), dan tidak melakukan aktvitas ke tempat-tempat keramaian guna memutuskan mata rantai penyebaran yang kian bertambah (Maria fitria, 2021).

Peneliti berasumsi bahwa Pembatasan Sosial Berskala Besar (PSBB) yang mengharuskan kita di rumah saja menyebabkan kecemasan pada remaja. Masalah tersebut muncul karena terjadinya perubahan sistem secara tiba-tiba akibat merebaknya virus Corona sehingga seseorang harus menyesuaikan secara mendadak terhadap perubahan pola, yakni dari kondisi normal menjadi kecemasan. Dampak pada remaja yaitu, secara psikologis mempengaruhi kejiwaan remaja karena perubahan sistem pembelajaran yang tadinya manual menjadi sistem daring. Ketidak siapan

diri ini memaksa remaja untuk mau tidak mau mengikutinya. Hal ini mengharuskan remaja untuk beradaptasi menghadapi kebiasaan baru yang mungkin dapat menimbulkan stres.

Minimnya aktivitas yang dilakukan dirumah. Jika selama ini remaja terbiasa bersosialisasi dengan teman di sekolah, namun saat pandemi mereka diharuskan untuk tinggal di rumah sehingga hal itu menjadi terbatasi. Akhirnya remaja kebingungan mencari kegiatan yang bisa dilakukan di rumah.

5.5 Identifikasi kecemasan remaja saat pandemi COVID-19

Berdasarkan hasil penelitian dari 5 artikel tentang faktor kecemasan remaja saat pandemi COVID-19 yang telah diperoleh didapatkan hasil, pada artikel 1 kecemasan remaja berada pada kategori ringan sebesar 2,1%, kategori sedang 43,9% dan kategori berat 54%. Pada artikel 2 kecemasan remaja berada pada kategori ringan sebesar 70,1%, kategori sedang 21,6% dan kategori berat 8,3%. Pada artikel 3 kecemasan remaja berada pada kategori ringan sebesar 21,3%, kategori sedang 2,7% dan kategori berat 0,9%. Pada artikel 4 kecemasan remaja berada pada kategori ringan sebesar 28,53%, kategori sedang 6,79% dan kategori berat 3,10%. Pada artikel 5 remaja yang mengalami kecemasan sebanyak 5,10%. Dari 5 artikel yang di analisis tingkat kecemasan remaja sebagian besar ringan sampai sedang.

Kecemasan adalah kekhawatiran akibat ancaman yang dirasakan terhadap kesehatan (Jungmann, M.S., & Witthoft, M. et al (2020).

Kekhawatiran kesehatan dan kecemasan yang terkait dengan epidemi atau pandemi dapat memiliki dampak psikologis yang signifikan (misalnya, stres, pikiran negatif yang mengganggu, penghindaran), dapat dikaitkan dengan perilaku preventif yang tidak efektif atau tidak menguntungkan. Beberapa penelitian telah mulai menyelidiki kecemasan dan gejala emosional lainnya selama pandemi COVID-19 saat ini (Jungmann, M. S., & Witthoft, M. et al (2020).

Kecemasan ini juga dialami oleh para remaja (Gozali, Tjahyo, & Vidyarini, 2018), karena usia remaja dapat dikatakan usia yang masih labil dalam menghadapi kondisi-kondisi yang tidak terduga (Tjukup, Putra, Yustiawan, & Usfunan, 2020). Adanya PSBB dan pembelajaran di rumah serta dibatalkannya berbagai aktivitas penting, banyak remaja kehilangan beberapa momen besar di kehidupan mereka dan juga momen keseharian seperti berkumpul dengan teman dan berpartisipasi di sekolahnya. Para remaja menghadapi situasi baru ini bukan hanya merasa kecewa, namun juga kecemasan dan perasaan terisolasi yang membebani terhadap perubahan hidup akibat wabah yang secara cepat (Rosi Oktari, 2020). Habibullah, dkk (2019) menyebutkan beberapa faktor yang mempengaruhi kecemasan seseorang yaitu: Rasa percaya diri, usia, jenis kelamin, dukungan sosial, kemampuan dalam berkomunikasi dan pola pikir. Faktor-faktor penyebab kecemasan saat pandemi COVID-19 yaitu: isolasi sosial, kurangnya interaksi dan gerakan fisik yang terbatas serta faktor psikologi (Djiemi, 2020).

Peneliti berasumsi bahwa kecemasan remaja saat pandemi COVID-19 yaitu diakibatkan karena faktor isolasi sosial yang mengharuskan remaja berada dirumah saja. Yang bisa dilakukan untuk mengatasinya yaitu dengan memberikan pengertian pada remaja bahwa kecemasannya adalah hal yang wajar. Kecemasan yang dialami remaja adalah fungsi normal dan sehat yang bisa membuat kita waspada terhadap ancaman tetapi jika strategi koping remaja maladaptif dapat mengakibatkan gangguan psikologis. Untuk mengurangi kecemasan remaja sebisa mungkin orang tua bisa menjadi teman berbagi bagi remaja. Berikan ruang pada remaja untuk terbuka soal perasaan khawatirnya kepada orangtua. Biarkan remaja menghubungi teman-teman untuk jalin komunikasi, berbagi cerita dan bisa melampiaskan apa yang dirasakannya. Dengan begitu, kejenuhan remaja saat pandemi bisa berkurang.

BAB VI

KESIMPULAN DAN SARAN

6.1 Kesimpulan

Berdasarkan analisis dari kelima artikel yang ditemukan, hasil *literature review* dapat disimpulkan:

1. Faktor usia remaja yang mengalami kecemasan saat pandemi COVID-19 berdasarkan *literature review* diperoleh hasil bahwa usia yang lebih muda lebih rentan mengalami kecemasan.
2. Faktor jenis kelamin remaja yang mengalami kecemasan saat pandemi COVID-19 berdasarkan *literature review* diperoleh hasil bahwa remaja laki-laki lebih banyak mengalami kecemasan.
3. Faktor pengetahuan remaja yang mengalami kecemasan saat pandemi COVID-19 berdasarkan *literature review* diperoleh hasil bahwa pengetahuan remaja tentang COVID-19 mempengaruhi kecemasan remaja.
4. Faktor hubungan sosial remaja yang mengalami kecemasan saat pandemi COVID-19 berdasarkan *literature review* diperoleh hasil bahwa, merasa terhubung secara sosial selama masa karantina secara signifikan mempengaruhi kecemasan.
5. Kecemasan remaja saat pandemi COVID-19 berdasarkan *literature review* diperoleh hasil bahwa tingkat kecemasan remaja sebagian besar ringan sampai sedang.

6.2 Saran

Berdasarkan hasil penelitian diatas maka peneliti menyarankan beberapa hal sebagai berikut :

1. Bagi masyarakat

   Masyarakat khususnya keluarga yang memiliki anak pada masa remaja lebih memperhatikan aktivitas remaja saat masa karantina, orang tua bisa menjadi teman berbagi bagi remaja supaya dapat mencegah kecemasan pada remaja saat pandemi COVID-19.

2. Bagi Institusi

   Penelitian ini bisa menjadi motivasi perawat komunitas khususnya komunitas remaja untuk mengetahui faktor – faktor kecemasan remaja saat pandemi COVID-19.

3. Bagi Peneliti Selanjutnya

   Bagi peneliti selanjutnya perlu melakukan penelitian langsung (*original research*) terkait faktor-faktor kecemasan remaja saat pandemi COVID-19.

DAFTAR PUSTAKA

Apriliana, I. P. A., Suranata, K., & Dharsana, I. K. (2019). *Mereduksi Kecemasan Siswa Melalui Konseling Cognitive Behavioral*. Indonesian Journal of Educational Counseling, 3(1), 21-30.

Bariyyah Hidayati, K., & . M. F. (2016). *Konsep Diri, Adversity Quotient dan Penyesuaian Diri pada Remaja*. Persona:Jurnal Psikologi Indonesia, 5(02), 137–144. https://doi.org/10.30996/persona.v5i02.730.

Bender, dkk. (2020). *Pesan dan Kegiatan Utama Pencegahan dan Pengendalian Covid-19 di Sekolah*. Education Unicef NYHQ

Covid19.go.id: Beranda. Informasi terbaru seputar penanganan COVID-19 di Indonesia oleh Pemerintah. Diakses pada tanggal 11 September 2020, dari www. https://covid19.go.id/

Djiemi. (2020). *Cemas Akibat Covid-19? Kata Dokter itu Adaptasi Normal*. https://lifestyle.bisnis.com/read/20200401/106/1221064/cemasakibatcovid-19-kata-dokter-itu-adaptasi-normal diakses pada tanggal 22 Desember 2020.

Fitria, L. (2020). *Cognitive Behavior Therapy Counseling Untuk Mengatasi Anxiety Dalam Masa Pandemi Covid-19*. AL-IRSYAD, 10(1).

Fuad, M., & Budiyono, A. (2012). *Pola Kelekatan di Kalangan Santri Usia Remaja Awal (Studi Kasus di Pondok Pesantren Anwarussholihin Pamujan Teluk, Banyumas)*. Personifikasi, 3(2), 25-35.

Gozali, M., Tjahyo, J. D. W., & Vidyarini, T. N. (2018). *Anxiety Uncertainty Management (AUM) Remaja Timor Leste di Kota Malang dalam Membangun Lingkungan Pergaulan*. Jurnal e-Komunikasi, 6(2).

Harirah, Z., & Rizaldi, A. (2020). *Merespon Nalar Kebijakan Negara Dalam Menangani Pandemi Covid 19 Di Indonesia*. Jurnal Ekonomi dan Kebijakan Publik Indonesia, 7(1).

Keliat, Budi, Anna, Helena, Novy & Farida Pipin. (2016). *Manajemen Keperawatan Psikososial & Kader Kesehatan Jiwa; CMHN (Intermediate Course)*. Jakarta: EGC.

Kemendikbud. (2016). *Kajian dan Pedoman Penguatan Pendidikan Karakter*. Jakarta: Kementerian Pendidikan dan Kebudayaan Republik Indonesia.

Kemenkes RI. *Profil Kesehatan Indonesia 2014*. Jakarta : Kemenkes RI, 2014.

Kemenkes RI. (2020). *Waspada Virus Corona*. http://yankes.kemkes.go.id/read-waspada-virus-corona-8627.html diakses pada tanggal 12 September 2020.

Lisa Mutiara Anissa , Suryani, R. M. (2018). *Tingkat Kecemasan Mahasiswa Keperawatan Dalam Menghadapi Ujian Berbasis Computer Based Test Lisa Mutiara Anissa 1 , Suryani 1 , Ristina Mirwanti 1 1*. *16*(2), 67–75.

Mona, N. (2020). *Konsep Isolasi Dalam Jaringan Sosial Untuk Meminimalisasi Efek Contagious (Kasus Penyebaran Virus Corona Di Indonesia)*. Jurnal Sosial Humaniora Terapan, 2(2).

Mubarak, W., Indrawati, L., Susanto, J. (2015). *Buku Ajar Ilmu Keperawatan dasar*. Edisi Ke-2. Salemba Medika.

Muyasaroh, H. (2020). *Kajian Jenis Kecemasan Masyarakat Cilacap dalam menghadapi Pandemi Covid 19*. LP2M UNUGHA Cilacap.

Purwanto, A., Pramono, R., Asbari, M., Hyun, C. C., Wijayanti, L. M., & Putri, R. S. (2020). *Studi Eksploratif Dampak Pandemi COVID-19 Terhadap Proses Pembelajaran Online di Sekolah Dasar*. EduPsyCouns: Journal of Education, Psychology and Counseling, *2*(1), 1-12.

Sabir, A., & Phil, M. (2016). *Gambaran Umum persepsi masyarakat terhadap bencana di Indonesia*. Jurnal Ilmu Ekonomi Dan Sosial, 5(3), 304-326.

Sarwono, Sarlito W (2013). *Psikologi Remaja*. Jakarta: Rajawali Pers

Stuart, G.W. (2006). *Buku Saku Keperawatan Jiwa*. Edisi 5. Jakarta: EGC

Tursina, A. (2020*). COVID-19 dan lansia*: Pusat Penerbitan Unisba (P2U) LPPM UNISBA.

Widiyani, R. (2020). *Latar Belakang Virus Corona, Perkembangan hingga Isu Terkini*. Retrieved from detik News.

LAMPIRAN

Rekap Artikel

NO	Judul	Peneliti	Tahun	Variabel yang dilihat
1.	Kecemasan remaja pada masa pandemi COVID-19	Linda fitria dan Ifdil Ifdil	2020	Kecemasan remaja
2.	Hubungan tingkat pengetahuan dengan tingkat kecemasan terhadap COVID-19 pada remaja di SMA Adven Balikpapan	Gheralyn Regina Suwandi dan Evelin Malinti	2020	Tingkat pengetahuan dan tingkat kecemasan remajaterhadap COVID-19
3.	*Factors affecting the anxiety levels of adolescents in home-quarantine during COVID-19 in Turkey*	Senai Kilincel M.D dkk	2020	Faktor yang mempengaruhi tingkat kecemasan remaja
4.	*Prevalance and risk faktors for anxiety symptoms during the outbreak of COVID-19: A large survey among 373216 junior and senior high school students in china*	Qingqing Xu, dkk	2021	Prevalensi dan faktor kecemasan selama pandemi COVID-19

5.	*Risk and protective factors for prospective changes in adolescent mental health during the COVID-19 pandemic*	Natasha R. Magsondkk	2020	Faktor risiko dan perubahan prospektif pada kesehatan mental remaja selama pandemi COVID-19

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Kecemasan remaja pada masa pandemi Covid -19

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ABSTRACT
This study objective to analyzed the level of anxiety experienced by adolescents during the covid-19 pandemic. This research uses descriptive quantitative research methods. The population in this study were adolescents aged 12 to 19 years, with a sample of 139 people. The instrument used was a questionnaire about anxiety. Data analysis uses descriptive analysis. Based on the analysis of research data, teenage anxiety during the covid-19 pandemic was in the high category at 54%.

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Pendahuluan

Pada saat ini dunia sedang dilanda pandemic yang cukup mengkhawatirkan, yaitu COVID-19. Hampir semua negara yang ada di dunia ini mengalami pandemic COVID-19 ini, tidak terkecuali Indonesia (Widiyani, 2020), (Roosinda & Suryandaru, 2020). COVID-19, adalah jenis virus baru (Zulva, 2020) yang ditemukan pada tahun 2019 dan belum pernah diidentifikasi menyerang manusia sebelumnya (World Health Organization, 2019). COVID-19 merupakan penyakit menular yang disebabkan oleh sindrom pernapasan akut coronavirus 2 (severe acute respiratory syndrome coronavirus 2 atau SARS-CoV-2) (Setiawan, 2020). Penularan virus corona yang sangat cepat karena inilah Organisasi Kesehatan Dunia (WHO) menetapkan virus corona sebagai pandemi pada 11 Maret 2020 (Mona, 2020). Status pandemi atau epidemi global menandakan bahwa penyebaran COVID-19 berlangsung sangat cepat. Beberapa langkah cepat dilakukan oleh pemerintah agar virus corona ini tidak menular dengan cepat, seperti menerapkan work from home (WFH), Social Distancing, dan lain-lain (TURSINA, 2020). Masyarakat juga diedukasi untuk menerapkan pola hidup sehat (Suprabowo, 2020) dengan mencuci tangan dengan sabun sesering mungkin, memakai masker ketika bepergian keluar rumah (Pratiwi, 2020), (Machendrawaty, Yuliani, Setiawan, & Yuningsih, 2020), serta menjaga jarak (Mardiana & Darmalaksana, 2020), (Masrul et al., 2020).

Kondisi yang datang tiba-tiba ini membuat masyarakat tidak siap menghadapinya baik secara fisik ataupun psikis (Sabir & Phil, 2016). Diantara kondisi psikologis yang dialami oleh masyarakat adalah rasa anxiety apabila tertular (Fitria, 2020), (Hanifah, Yusuf Hasan, Nanda Noor, Tatang Agus, & Muhammad, 2020). Menurut American Psychological Association (APA), kecemasan merupakan keadaan emosi yang muncul saat individu sedang stress, dan ditandai oleh perasaan tegang, pikirang yang mebuat individu merasa khawatir dan disertai respon fisik (jantung berdetak kencang, naiknya tekanan darah, dan lain sebagainya (Okazaki, 1997), (Beaudreau & O'Hara, 2009). Kartini Kartono bahwa anxiety adalah bentuk ketidakberanian ditambah kerisauan terhadap hal-hal yang tidak jelas (Kartono & Andari, 1989), (Annisa & Ifdil, 2016).

Senada dengan itu, Sarlito menjelaskan anxiety merupakan perasaan takut yang tidak jelas objeknya dan tidak jelas pula alasannya (Sarlito, 2012). Anxiety ini juga dialami oleh para remaja (Gozali, Tjahyo, & Vidyarini, 2018), karena usia remaja dapat dikatakan usia yang masih labil dalam menghadapi kondisi-kondisi yang tidak terduga (Tjukup, Putra, Yustiawan, & Usfunan, 2020). Kondisi emosi remaja akan mudah terguncang seperti, anxiety yang berlebihan, ketakutan akan tertular virus ini dan sebagainya (Dani & Mediantara, 2020). Penelitian ini mengungkap tentang kondisi anxiety yang dialami oleh remaja pada masa pandemic COVID-19.

Metode

Metode yang digunakan dalam penelitian ini adalah kuantitatif deskriptif. sampel penelitian ini adalah 139 remaja dengan menggunakan teknik *Purposive Random Sampling*. Instrument yang digunakan Skala Kecemasan Remaja. Analisis data menggunakan analisis deskriptif menggunakan dengan bantuan program SPSS.

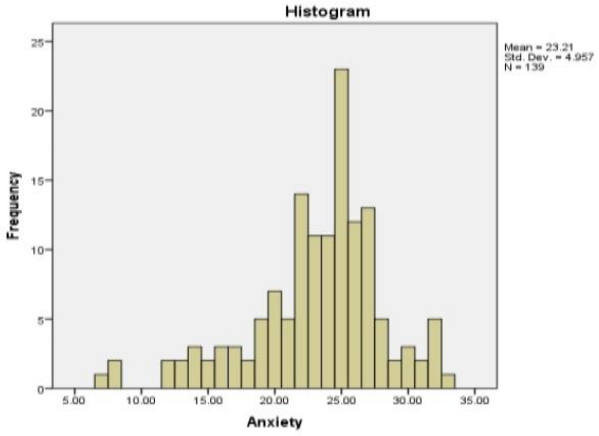
Hasil dan Pembahasan

Hasil analisis deskriptif data penelitian tentang anxiety yang dialami remaja pada masa pandemic COVID-19 dijelaskan pada tabel berikut ini.

Tabel 1. Anxiety yang dialami remaja pada masa pandemic COVID-19

Kategori	Interval	f	%
Rendah	< 12	3	2,1
Sedang	12 ≥ X < 24	61	43,9
Tinggi	24 - 35	75	54

Berdasarkan tabele di atas dapat diketahui bahwa tingkat anxiety remaja pada masa pandemic covid-19 berada pada kategori rendah sebesar 2,1%, kategori sedang 43,9% dan kategori tinggi 54%. Dapat juga dilihat dalam histogram berikut:



Grafik 1. Diagram Batang hasil pengolahan Data Tentang Tingkat Anxiety Remaja Pada Masa Pandemi Covid-19.

Hasil penelitian penelitian menyatakan bahwa tingkat anxiety remaja 54% berada pada kategori tinggi. Hal ini kemungkinan besar disebabkan karena kurangnya informasi yang diperoleh remaja terkait dengan pandemi covid-19 ini (Purwanto et al., 2020). Yang ada pada pikiran remaja adalah virus corona sangat berbahaya

(Zaharah, Kirilova, & Windarti, 2020), yang apabila seseorang terinfeksi virus ini sulit untuk sembuh (Putri, 2020), dan kebanyakan meninggal. Beberapa faktor yang menyebabkan anxiety pada masa pandemic COVID-19 adalah kurangnya informasi mengenai kondisi ini, pemberitaan yang terlalu heboh di media masa ataupun media social (Aulia, 2018), kurangnya membaca literasi terkait dengan penyebaran dan mengantisipasi penularan corona virus.

Anxiety yang dialami remaja ini akan berdampak kepada; 1) Kurang tidu, anxiety dapat menyebabkan insomnia dan masalah tidur lainnya (Sohat, Bidjuni, & Kallo, 2014). Semakin sedikit tidur maka semakin besar tingkat anxiety. Untuk mengatasi kurang tidur dapat dilakukan dengan fokus pada cara-cara untuk meningkatan kualitas tidur, dengan meningkatnya kualitas tidur maka dapat mengurangi anxiety. Pertahankanlah waktu tidur yang konsisten, batasi konsumsi kopi dan alkohol, matikan alarm, olahraga, dan berjemur pada paparan sinar matahari setiap hari. Hal lain yang dapat dilakukan adalah menjaga kamar tidur tetap sejuk, gelap dan tenang, serta menjauhi gadget agar lebih cepat tidur; 2) Kesulitan untuk fokus, COVID-19 telah mengancam kesehatan fisik dan psikis, dan cara hidup sehari-hari. Secara tidak sengaja, setiap hari terus mendengar berbagai berita dan kemudian memikirkan cara-cara untuk melindungi diri dari virus. Masalahnya adalah, selama di rumah juga harus tetap fokus untuk belajar. Akibat pemberitaan COVID-19, pikiran menjadi tidak fokus dan sulit berkonsentrasi pada pelajaran (Hanifah, et al., 2020). Cara untuk meningkatkan konsentrasi pada masa pandemic ini adalah dengan mengurutkan apa yang mesti dilakukan, serta jangan lupa juga untuk istirahat yang cukup; 3) Sering lupa, Alexandra Parpura, ahli gerontologi dan pendiri *Aging Perspectives di Chevy Chase* menjelaskan bahwa anxiety dapat mempengaruhi memori. Apa pun yang merilekskan tubuh akan membantu ingatan, karena relaksasi melibatkan sistem saraf parasimpatis. Kegiatan relaksasi yang baik seperti olahragajuga dapat merelaksasi ingatan. Melakukan permainan yang mengasah kemampuan untuk fokus seperti teka-teki silang, Sudoku, membuat kerajinan tangan, bermain video games, atau bermain alat musik juga dapat membantu untuk mengurangi lupa; 4) Meningkatnya iritabilitas dan mudah marah, anxiety dapat merubah emosi remaja seperti mudah marah. Anxiety yang dialami tiap orang berbeda-beda, tentu saja hal ini berkontribusi terhadap iritabilitas dan kemarahan. Penelitian menunjukkan bahwa anxiety juga dapat memicu emosi ini (Hanifah, et al., 2020).

Kondisi anxiety yang dialami remaja pada masa pandemic ini tentu tidak bisa dibiarkan begitu saja (Harirah & Rizaldi, 2020). Untuk mengatasi anxiety pada remaja ini peran orangtua sangat dibutuhkan (Fuad & Budiyono, 2012), diantaranya selalu mendampingi, memotivasi, memberikan pengetahuan tentang COVID-19 ini. Selaku konselor atau guru bimbingan dan konseling ada beberapa hal yang dapat dilakukan untuk membantu remaja mengatasi anxiety adalah dengan memberikan pelayanan seperti layanan konseling individual, bimbingan dan konseling kelompok. Berbagai pendekatan konseling dapat diterapkan dalam kegiatan ini. Berdasarkan beberapa penelitian menyatakan menggunakan pendekan Cognitive Behavioral Therapy (CBT) lebih efektif untuk mengatasi kecemasan (Apriliana, Suranata, & Dharsana, 2019), dibandingkan pendekatan yang lain.

Kesimpulan

Berdasarkan hasil penelitian diketahui bahwa tingkat anxiety remaja pada masa pandemic covid-19 berada pada kategori tinggi. Keadaan ini harus direduksi dengan memberikan berbagai pelayanan konseling agar tingkat anxiety remaja tersebut dapat diperkecil. Layanan yang dapat diberikan kepada remaja untuk menurunkan tingkat anxiety dalam masa pandemic covid-19 adalah layanan konseling individual, bimbingan dan konseling kelompok.

Referensi

Annisa, D. F., & Ifdil, I. (2016). Konsep kecemasan (anxiety) pada lanjut usia (lansia). *Konselor, 5*(2), 93-99.

Apriliana, I. P. A., Suranata, K., & Dharsana, I. K. (2019). Mereduksi Kecemasan Siswa Melalui Konseling Cognitive Behavioral. *Indonesian Journal of Educational Counseling, 3*(1), 21-30.

Aulia, D. P. (2018). *Memerangi Berita Bohong Di Media Sosial (Studi Terhadap Gerakan Masyarakat Anti Fitnah Indonesia).* Fakultas Ilmu dakwah dan Ilmu Komunikasi Universitas Islam Negeri Syarif ….

Beaudreau, S. A., & O'Hara, R. (2009). The association of anxiety and depressive symptoms with cognitive performance in community-dwelling older adults. *Psychology and aging, 24*(2), 507.

Dani, J. A., & Mediantara, Y. (2020). Covid-19 dan Perubahan Komunikasi Sosial. *Persepsi: Communication Journal, 3*(1), 94-102.

Fitria, L. (2020). Cognitive Behavior Therapy Counseling Untuk Mengatasi Anxiety Dalam Masa Pandemi Covid-19. *AL-IRSYAD, 10*(1).

Fuad, M., & Budiyono, A. (2012). Pola Kelekatan di Kalangan Santri Usia Remaja Awal (Studi Kasus di Pondok Pesantren Anwarussholihin Pamujan Teluk, Banyumas). *Personifikasi, 3*(2), 25-35.

Gozali, M., Tjahyo, J. D. W., & Vidyarini, T. N. (2018). Anxiety Uncertainty Management (AUM) Remaja Timor Leste di Kota Malang dalam Membangun Lingkungan Pergaulan. *Jurnal e-Komunikasi, 6*(2).

Hanifah, M., Yusuf Hasan, B., Nanda Noor, F., Tatang Agus, P., & Muhammad, R. (2020). Kajian Jenis Kecemasan Masyarakat Cilacap dalam menghadapi Pandemi Covid 19. *Kajian Jenis Kecemasan Masyarakat Cilacap dalam menghadapi Pandemi Covid 19*.

Harirah, Z., & Rizaldi, A. (2020). MERESPON NALAR KEBIJAKAN NEGARA DALAM MENANGANI PANDEMI COVID 19 DI INDONESIA. *Jurnal Ekonomi dan Kebijakan Publik Indonesia, 7*(1).

Kartono, K., & Andari, J. (1989). Hygiene mental dan kesehatan mental dalam Islam. *Bandung: Mandar Maju*.

Machendrawaty, N., Yuliani, Y., Setiawan, A. I., & Yuningsih, Y. (2020). Optimalisasi fungsi mesjid di tengah pandemic Covid 19: Telaah syar'i, regulasi dan aplikasi. *UIN Sunan Gunung Djati Bandung*.

Mardiana, D., & Darmalaksana, W. (2020). Relevansi Syahid Ma'nawi dengan Peristiwa Pandemic Covid-19: Studi Matan Pendekatan Ma'anil Hadis. *Jurnal Perspektif, 4*(1), 12-19.

Masrul, M., Tasnim, J. S., Daud Oris Krianto Sulaiman, C. P., Purnomo, A., Febrianty, D. H. S., Purba, D. W., . . . Ramadhani, Y. R. (2020). Pandemik COVID-19: Persoalan dan Refleksi di Indonesia. *Medan: Yayasan Kita Menulis*.

Mona, N. (2020). Konsep Isolasi Dalam Jaringan Sosial Untuk Meminimalisasi Efek Contagious (Kasus Penyebaran Virus Corona Di Indonesia). *Jurnal Sosial Humaniora Terapan, 2*(2).

Okazaki, S. (1997). Sources of ethnic differences between Asian American and White American college students on measures of depression and social anxiety. *Journal of Abnormal Psychology, 106*(1), 52.

Pratiwi, A. D. (2020). Gambaran Penggunaan Masker di Masa Pandemi Covid-19 Pada Masyarakat di Kabupaten Muna. *Prosiding Nasional Covid-19*, 52-57.

Purwanto, A., Pramono, R., Asbari, M., Hyun, C. C., Wijayanti, L. M., & Putri, R. S. (2020). Studi Eksploratif Dampak Pandemi COVID-19 Terhadap Proses Pembelajaran Online di Sekolah Dasar. *EduPsyCouns: Journal of Education, Psychology and Counseling, 2*(1), 1-12.

Putri, A. (2020). Penyakit Menular & Virus Corona.

Roosinda, F. W., & Suryandaru, Y. S. (2020). Framing of propaganda and negative content in Indonesian media. *Jurnal Studi Komunikasi, 4*(1), 63-74.

Sabir, A., & Phil, M. (2016). Gambaran Umum persepsi masyarakat terhadap bencana di Indonesia. *Jurnal Ilmu Ekonomi Dan Sosial, 5*(3), 304-326.

Sarlito, W. S. (2012). Psikologi remaja. *Jakarta: PT. Raja Grafindo Persada*.

Setiawan, A. R. (2020). Lembar Kegiatan Literasi Saintifik untuk Pembelajaran Jarak Jauh Topik Penyakit Coronavirus 2019 (COVID-19).

Sohat, F., Bidjuni, H., & Kallo, V. (2014). Hubungan Tingkat Kecemasan Dengan Insomnia Pada Lansia Di Balai Penyantunan Lanjut Usia Senja Cerah Paniki Kecamatan Mapanget Manado. *Jurnal Keperawatan, 2*(2).

Suprabowo, G. Y. A. (2020). Memaknai Hospitalitas di Era New Normal: Sebuah Tinjauan Teologis Lukas 10: 25-37. *HARVESTER: Jurnal Teologi dan Kepemimpinan Kristen, 5*(1), 43-58.

Tjukup, I. K., Putra, I. P. R. A., Yustiawan, D. G. P., & Usfunan, J. Z. (2020). Penguatan Karakter Sebagai Upaya Penanggulangan Kenakalan Remaja (Juvenile Delinquency). *KERTHA WICAKSANA: Sarana Komunikasi Dosen dan Mahasiswa, 14*(1), 29-38.

TURSINA, A. (2020). COVID-19 dan lansia: Pusat Penerbitan Unisba (P2U) LPPM UNISBA.

Widiyani, R. (2020). Latar Belakang Virus Corona, Perkembangan hingga Isu Terkini. *Retrieved from detik News*.

Zaharah, Z., Kirilova, G. I., & Windarti, A. (2020). Impact of Corona Virus Outbreak Towards Teaching and Learning Activities in Indonesia. *SALAM: Jurnal Sosial dan Budaya Syar-i, 7*(3), 269-282.

Zulva, T. N. I. (2020). Covid-19 Dan Kecenderungan Psikosomatis. *J. Chem. Inf. Model*, 1-4.

Artikel 2

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Hubungan Tingkat Pengetahuan Dengan Tingkat Kecemasan Terhadap Covid-19 Pada Remaja Di SMA Advent Balikpapan

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ABSTRACT : THE RELATIONSHIP BETWEEN LEVELS OF KNOWLEDGE AND LEVELS OF ANXIETY TOWARD COVID-19 AMONG ADOLESCENTS AT BALIKPAPAN ADVENTIST HIGH SCHOOL

***Introduction**: coronavirus Disease (Covid-19) that appear in Indonesia since the beginning of March 2020 has become a serious condition to all age groups, including teenager. Teenager is called age of transition, when biological and psychological development occurs. Covid-19 can affect the psychological development of adolescents, causing anxiety that can not be controlled. One of the factors that influence anxiety is knowledge.*
***Purpose**: the purpose of this paper was to know the relationship between knowledge levels with anxiety levels in adolescents on the Covid-19 pandemic.*
***Method**: the study utilized a descriptive analytic with total sampling design. Respondents in this paper were all students of XII class in Balikpapan Adventist Senior High School totaling 60 people. Data collection using knowledge questionnaire adopted from the WHO surveyand Hamilton Anxiety Rating Scale (HARS) questionnaire.*
***Result**: there were 9 respondents (15%) with standard knowledge felt mild anxiety, 33 respondents (55%) with good knowledge felt mild anxiety, 4 respondents (6.6%) with standard knowledge felt moderate anxiety, 9 respondents (15%) with good knowledge felt moderate anxiety, 1 respondent (1.7%) with standard knowledge felt severe anxiety, 4 respondents (6.7%) with good knowledge felt severe anxiety. The results of the chi-square test obtained p-value of 0.135 < a (0,05).*
***Conclusion**: There is no relationship between the level of knowledge and the level of anxiety in adolescents at Balikpapan Adventist High School.*

***Keywords** : adolescents; anxiety; covid-19; knowledge*

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INTISARI : HUBUNGAN TINGKAT PENGETAHUAN DENGAN TINGKAT KECEMASAN TERHADAP COVID-19 PADA REMAJA DI SMA ADVENT BALIKPAPAN

Latar Belakang: *corona virus disease* (Covid-19) yang muncul di Indonesia sejak awal Maret 2020 telah menjadi ancaman serius pada semua kalangan usia, tidak terkecuali usia remaja. Remaja merupakan usia transisi saat dimana perkembangan biologis dan psikologis terjadi. Covid-19 dapat mempengaruhi perkembangan psikologis remaja tersebut, sehingga menimbulkan kecemasan yang tidak dapat dikontrol. Salah satu faktor yang mempengaruhi kecemasan ialah pengetahuan.
Tujuan: diketahui hubungan antara tingkat pengetahuan dengan tingkat kecemasan pada remaja terhadap pandemi Covid-19.
Metode Penelitian: jenis penelitian deskriptif analitik dengan teknik *total sampling*. Responden pada penelitian ini merupakan seluruh murid kelas XII SMA Advent Balikpapan berjumlah 60 orang. Pengumpulan data menggunakan kuesioner pengetahuan yang diadopsi dari survei WHO dan kuesioner *Hamilton Anxiety Rating Scale* (HARS).
Hasil: diketahui sebanyak 9 responden (15%) berpengetahuan cukup mengalami kecemasan ringan, sebanyak 33 responden (55%) berpengetahuan baik mengalami kecemasan ringan, sebanyak 4 responden (6,6%) berpengetahuan cukup mengalami kecemasan sedang, sebanyak 9 responden (15%) berpengetahuan baik mengalami kecemasan sedang, sebanyak 1 responden (1,7%) berpengetahuan cukup mengalami kecemasan berat, dan sebanyak 4 responden (6,7%) berpengetahuan baik mengalami kecemasan berat. Hasil analisis dengan uji *chi-square* didapatkan p-value yaitu 0,135 > α (0,05).
Kesimpulan: tidak terdapat hubungan antara tingkat pengetahuan dengan tingkat kecemasan yang dialami pada remaja, khususnya remaja kelas XII SMA Advent Balikpapan.

Kata kunci : covid-19; kecemasan; pengetahuan; remaja

PENDAHULUAN

Coronavirus Disease 2019 (Covid-19) adalah penyakit menular yang disebabkan oleh virus jenis baru yang belum pernah diidentifikasi pada manusia sebelumnya. Covid-19 menjadi ancaman serius di Indonesia bahkan di seluruh dunia, sehingga sudah disebut menjadi pandemi global. Setiap harinya angka korban positif Covid-19 masih terus meningkat, menyerang setiap orang tanpa memandang jenis kelamin dan usia (Wulandari et al., 2020). Tidak terkecuali pada masa transisi atau masa peralihan, yaitu masa remaja, Covid-19 sangat mempengaruhi konsep diri setiap remaja.

Menurut *World Health Organization* (WHO), rentang usia remaja ialah 10-19 tahun. Menurut Peraturan Menteri Kesehatan RI nomor 25 tahun 2014, rentang usia remaja ialah 10-18 tahun. Sementara menurut Badan Kependudukan dan Keluarga Berencana Nasional (BKKBN), rentang usia remaja ialah 10-24 tahun dan belum menikah. Perbedaan definisi tersebut menunjukkan bahwa belum ada kesepakatan bersama mengenai batasan usia remaja. Walaupun begitu masa remaja disebut dengan

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masa peralihan dari anak-anak menuju dewasa (Bawenta, 2019).

Usia remaja disebut sebagai masa transisi atau peralihan karena terjadi pertumbuhan, perkembangan, dan perubahan secara biologis serta psikologis. Perubahan biologis ditandai dengan tumbuh dan berkembangnya seks primer sedangkan perubahan psikologis ditandai dengan berubah-ubahnya sikap, perasaan, dan emosi. Masa peralihan ini dijuluki masa yang penuh dengan badai dan tekanan, karena menimbulkan pergolakan emosi, rasa cemas, dan ketidaknyamanan sebab remaja tersebut diharuskan beradaptasi dan menerima semua perubahan yang terjadi (Bariyyah Hidayati & ., 2016). Covid-19 yang terjadi akan menambah badai dan tekanan pada remaja, bahkan dapat menimbulkan kecemasan. Di Indonesia, setiap tahunnya angka kecemasan terus meningkat, diperkirakan 20% dari populasi dunia dan sebanyak 47,7% remaja merasa cemas (Hasibuan & Riyandi, 2019).

Sebenarnya kecemasan merupakan perasaan yang normal yang dimiliki manusia, karena saat merasa cemas manusia disadarkan dan diingatkan bahwa ada situasi bahaya yang mengancam. Namun saat kecemasan yang tadinya normal dan dapat dikontrol berubah menjadi kecemasan yang terus menerus dan tidak dapat dikontrol, kecemasan itu akan megganggu aktivitas sehari-hari (Dewi & Fauziah, 2018). Kecemasan adalah emosional negatif yang dirasakan manusia, munculnya perasaan dan pikiran yang tegang, biasanya disertai dengan gejala detak jantung kencang, berkeringat, dan sesak (Annisa & Ifdil, 2016). Rasa cemas dibagi menjadi empat tingkatan, yaitu cemas ringan, cemas sedang, cemas berat, dan cemas berat sekali. Tingkat kecemasan yang dirasakan setiap individu berbeda-beda, dipengaruhi oleh bagaimana individu tersebut menyesuaikan diri dan mengatasi situasi yang memicu kecemasan (Lisa Mutiara Anissa, Suryani, 2018).

WHO mendefinisikan sehat secara holistik atau menyeluruh, yaitu sehat secara fisik, mental, dan sosial. Berdasarkan definisi tersebut, maka seharusnya upaya penanganan Covid-19 bukan saja berfokus pada kesehatan fisik, namun juga kesehatan mental dan sosial. Sehingga perlu diketahui seberapa besar kecemasan yang disebabkan karena pandemi Covid-19 pada masyarakat, khususnya remaja, agar dijadikan dasar dalam upaya penanganan secara mental dan sosial (Muyasaroh, 2020).

Kecemasan dipicu oleh berbagai macam faktor, salah satunya ialah pengetahuan (Utami, 2019, p. 4). Pengetahuan merupakan dasar dari tindakan seseorang, sehingga menstimulus seseorang untuk melakukan sesuatu. Pengetahuan dapat diperoleh dari berbagai sumber, salah satunya orangtua. Pengetahuan yang diperoleh dari orangtua mampu mengurangi kecemasan remaja dalam menghadapi perubahan-perubahan yang terjadi (Mukhoirotin, 2016). Karena keluarga adalah unit kelompok terkecil pertama yang dikenal dan dipercayai oleh remaja, sehingga peran orangtua dalam meningkatan pengetahuan remaja sangat penting (Rochmania, 2017). Selain orangtua, remaja juga dapat menemukan sumber informasi dari tenaga kesehatan, yaitu melalaui pendidikan kesehatan. Pendidikan

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kesehatan yang dilakukan di sekolah merupakan upaya yang paling efeketif di antara unit masyarakat yang lain (Nadeak et al., 2014).

Remaja adalah individu yang mampu menangkap informasi dengan cepat, namun cara yang digunakan dalam menangkap informasi tersebut berbeda-beda. Sehingga perlu diketahui cara apa yang paling tepat yang dapat memaksimalkan remaja dalam memperoleh pengetahuan (Natalia et al., 2020). Kemudian pengetahuan yang diberikan kepada remaja harus dipastikan merupakan informasi yang tepat, karena informasi yang tidak tepat dapat menimbulkan kecemasan dan stres (Setiawan et al., 2018). Wabah Covid-19 yang saat ini menjadi topik pembahasan utama di seluruh dunia menyebabkan munculnya ribuan tulisan dan pemberitaan tentang Covid-19 di berita dan internet setiap harinya. Namun tidak semua informasi tersebut benar, banyak kabar yang simpang siur yang dapat menambah kekhawatiran dan kecemasan remaja yang membaca dan mendengarnya (Nurislaminingsih, 2020). Oleh karena itu peneliti tertarik untuk mengetahui apakah terdapat hubungan antara pengetahuan yang dimiliki remaja mengenai Covid-19 dengan kecemasan yang dialami karena pandemi Covid-19.

METODE PENELITIAN

Jenis penelitian ini menggunakan metode penelitian deskriptif analitik. Menurut Sugiyono (2017, p. 147) dalam Azahari (2017) analisis deskriptif adalah statistik yang digunakan untuk menganalisa data dengan cara mendeskripsikan atau menggambarkan data yang telah terkumpul sebagaimana adanya tanpa bermaksud membuat kesimpulan yang berlaku untuk umum atau generalisasi.

Populasi dalam penelitian ini adalah siswa dan siswi kelas XII di SMA Advent Balikpapan yang berjumlah 60 orang. Teknik pengambilan sampel menggunakan teknik *nonprobability* yaitu sampel jenuh atau sering disebut *total sampling*, dimana semua anggota populasi dijadikan sebagai sampel. Jadi sampel dalam penelitian ini adalah seluruh siswa dan siswi kelas XII SMA Advent Balikpapan yang berjumlah 60 orang, terdiri dari 24 siswa laki-laki dan 36 siswa perempuan.

Terdapat dua variabel pada penelitian ini, yaitu tingkat pengetahuan dan tingkat kecemasan. Untuk mengetahui tingkat pengetahuan dengan mengadopsi kuesioner dari survei WHO yang terdiri dari 40 pertanyaan benar atau salah. Sedangkan kuesioner untuk mengukur tingkat kecemasan menggunakan kuesioner *Hamilton Anxiety Rating Scale* (HARS). HARS terdiri dari 14 item untuk penilaian kecemasan, meliputi perasaan cemas; ketegangan; gangguan tidur; gangguan kecerdasan; perasaan depresi; gejala somatik; gejala sensorik; gejala kardiovaskuler; gejala pernapasan; gejala gastrointestinal; gejala urogenital; gejala otonom; dan tingkah laku (Wahyudi et al., 2019).

Setelah peneliti mendapatkan pernyataan layak etik dengan No. 084/KEPK-FIK.UNAI/EC/VI/20, peneliti mengajukan ijin kepada kepala sekolah SMA Advent Balikpapan untuk mengadakan penelitian dan menjelaskan prosedur yang akan

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dilakukan pada penelitian. Setelah mendapatkan ijin, proses pengumpulan data diawali dengan menghubungi calon responden melalui aplikasi *Whatsapp* dan memberi penjelasan tentang maksud dan tujuan penelitian. Setiap responden yang setuju untuk ikut serta dalam penelitian, akan dikirimkan kuesioner dalam bentuk online. Lalu peneliti melakukan analisis untuk mengetahui hubungan antara kedua variabel dan menguji menggunakan uji *chi square*.

HASIL PENELITIAN

Tabel 1. Distribusi Frekuensi Tingkat Pengetahuan Remaja tentang Covid-19 pada Murid Kelas XII SMA Advent Balikpapan

Tingkat Pengetahuan	Wanita		Pria		Total	
	(n)	(%)	(n)	(%)	(n)	(%)
Cukup	8	13,3	6	10	14	23,3
Baik	16	26,7	30	50	46	76,7
Total	24	40	36	60	60	100

Berdasarkan hasil distribusi pada tabel 1, menunjukkan bahwa sebagian besar siswa memiliki tingkat pengetahuan baik tentang Covid-19 yaitu sebanyak 46 responden (76,7%). Dan yang memiliki tingkat pengetahuan baik ialah lebih banyak siswa laki-laki dibandingkan siswa perempuan, yaitu sebanyak 30 siswa laki-laki (50%).

Tabel 2. Distribusi Frekuensi Tingkat Kecemasan Remaja tentang Covid-19 pada Murid Kelas XII SMA Advent Balikpapan

Tingkat Kecemasan	Wanita		Pria		Total	
	(n)	(%)	(n)	(%)	(n)	(%)
Ringan	17	28.4	25	41.7	42	70.1
Sedang	5	8.3	8	13.3	13	21.6
Berat	2	3.3	3	5	5	8.3
Total	24	40	36	60	60	100

Tabel 2 menunjukkan bahwa mayoritas 42 responden (70%) mengalami kecemasan ringan, dan sebagian kecil mengalami kecemasan berat sebanyak 5 responden (8,3%). Dan siswa laki-laki lebih banyak mengalami kecemasan dibandingkan siswa perempuan, yaitu sebanyak 36 siswa laki-laki (60%).

Tabel 3. Hubungan Tingkat Pengetahuan dengan Tingkat Kecemasan terhadap Covid-19 pada Remaja di Kelas XII SMA Advent Balikpapan

Tingkat Pengetahuan	Tingkat Kecemasan						Total		*P-value*
	Cemas Ringan		Cemas Sedang		Cemas Berat				
	n	%	n	%	n	%	N	%	
Cukup	9	15	4	6.6	1	1.7	14	23.3	0.135
Baik	33	55	9	15	4	6.7	46	76.7	
Total	42	70	13	21.6	5	8.4	60	100	

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Variabel tingkat pengetahuan memiliki hubungan bermakna terhadap tingkat kecemasan apabila *p-value* < 0,05. Berdasarkan hasil uji statistic *chi square* diperoleh *p-value* = 0,135 atau > 0,05 yang menandadakan tidak terdapat hubungan yang signifikan antara tingkat pengetahuan dengan tingkat kecemasan terhadap Covid-19 pada remaja kelas XII di SMA Advent Balikpapan.

PEMBAHASAN

Tabel 1 menunjukkan terdapat 14 siswa (23,3%) yang memiliki pengetahuan cukup. Perubahan biologis dan psikologis yang belum matang pada remaja dapat menyebabkan kurangnya pengetahuan remaja, ditambah juga karena informasi yang kurang dari orangtua (Winarti et al., 2017).

Tabel 1 menunjukan bahwa lebih banyak siswa laki-laki yang memiliki pengetahuan yang baik tentang Covid-19 daripada siswa perempuan, yaitu sebanyak 30 siswa laki-laki (50%). Tabel 2 menunjukkan bahwa lebih banyak siswa laki-laki yang mengalami kecemasan dibandingkan dengan siswa perempuan, yaitu sebanyak 36 siswa laki-laki (60%). Hal ini tidak sejalan dengan yang dikatakan oleh Masdar et al. (2016) bahwa kecemasan dan depresi terjadi lebih banyak pada wanita. Karena biasanya mental laki-laki dalam menghadapi situasi yang mengancam dirinya lebih kuat dibandingkan perempuan (Saputri et al., 2016). Perbandingan tingkat pengetahuan dan tingkat kecemasan berdasarkan pada tabel 1 dan tabel 2 menunjukkan bahwa walaupun lebih banyak siswa laki-laki yang memiliki pengetahuan baik, namun ternyata siswa laki-laki juga yang lebih banyak mengalami kecemasan yang tinggi, hal ini menunjukkan bahwa pengetahuan yang baik tentang Covid-19 tidak menjamin kecemasan yang dialami remaja tersebut ialah kecemasan ringan.

Tabel 3 menunjukkan bahwa 33 siswa (55%) dengan tingkat pengetahuan baik mengalami kecemasan ringan. Namun 4 siswa (6,7%) dengan pengetahuan baik mengalami kecemasan berat. Sedangkan 9 siswa (15%) yang memiliki pengetahuan cukup justru mengalami kecemasan ringan. Hal tersebut kembali menunjukkan bahwa pengetahuan yang baik tentang Covid-19 tidak menjamin kecemasan yang dialami pasti ringan. Begitupula sebaliknya, bila pengetahuan tentang Covid-19 yang dimiliki sebatas cukup, belum tentu remaja tersebut akan mengalami kecemasan berat.

Terdapat beberapa hal yang dapat menyebabkan kecemasan, meliputi (1) faktor usia memegang peranan penting karena berbeda usia maka berbeda pula tahap perkembangannya; (2) lingkungan yang kondusif akan menurunkan resiko kecemasan pada seseorang; (3) pengetahuan dan pengalaman seorang individu dapat membantu menyelesaikan masalah-masalah psikis termasuk kecemasan; (4) peran keluarga yang kurang mendukung akan menjadikan remaja tertekan dan mengalami kecemasan (PH et al., 2018).

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18 Maret 2020, dan sejak saat itu penambahan kasus terus meningkat setiap harinya dan sudah memasuki angka tiga digit kasus terkonfirmasi positif Covid-19 (Paramita et al., 2020). Namun dengan cepat Walikota Balikpapan mengeluarkan surat edaran No. 440/0277/HUK mengenai Tindak Lanjut Pencegahan Penyebaran Covid-19 di Kota Balikpapan. Pada surat edaran disampaikan hal-hal yang harus dilakukan masyarakat kota Balikpapan untuk mencegah penyebaran Covid-19. Diantaranya ialah pengaturan kegiatan belajar mengajar di sekolah, pengaturan kegiatan usaha dan tempat hiburan, pengaturan kegiatan mengumpulkan orang banyak, dan pengaturan kegiatan di pasar atau pedagang kaki lima. Dan di akhir surat edaran, Walikota Balikpapan menuliskan "Masyarakat agar tetap tenang dan waspada, Covid-19 bisa sembuh" (Department of Disease Control, 2020).

Satu dari banyak faktor yang mempengaruhi kecemasan ialah lingkungan. Lingkungan yang kondusif di kota Balikpapan, panduan pencegahan penularan Covid-19 yang sudah dikeluarkan oleh Walikota Balikpapan, serta edukasi yang diberikan dapat menurunkan kecemasan yang dirasakan oleh masyarakat Balikpapan, khususnya remaja. Pengetahuan yang kurang namun didukung dengan lingkungan yang kondusif, dapat mempengaruhi kecemasan remaja. Selain itu pengetahuan yang baik namun peran orangtua kurang optimal dalam menenangkan remaja, juga dapat mempengaruhi kecemasan.

Jadi banyak sekali faktor-faktor yang mempengerahi kecemasan remaja dalam menghadapi Covid-19.

KESIMPULAN

Hasil penelitian ini menunjukkan bahwa tidak terdapat hubungan yang signifikan antara pengetahuan yang dimiliki remaja tentang Covid-19 dengan tingkat kecemasan yang dialami pada remaja. Oleh sebab itu peneliti selanjutnya dapat mengidentifikasi ulang faktor apa yang menyebabkan kecemasan remaja saat pandemi Covid-19, sehingga dapat dijadikan dasar dalam upaya untuk menangani gangguan mental remaja karena pandemi.

DAFTAR PUSTAKA

Annisa, D. F., & Ifdil, I. (2016). Konsep Kecemasan (Anxiety) pada Lanjut Usia (Lansia). *Konselor*, *5*(2), 93. https://doi.org/10.24036/0201 6526480-0-00.

Azhari, M. F. (2017). Pengaruh Self Assessment System Dan Pemeriksaan Pajak Terhadap Tax Evasion (Survey Pada Kpp Madya Bandung, Kpp Pratama Bandung Cibeunying, Kpp Pratama Bandung Cicadas, Kpp Pratama Bandung Tegallega, Dan Kpp Pratama Bandung Bojonagara). *Repository: UNPAS*, 77–78. http://repository.unpas.ac.id/ 27868/5/BAB III.pdf.

Bariyyah Hidayati, K., & . M. F. (2016). Konsep Diri, Adversity Quotient dan Penyesuaian Diri pada Remaja. *Persona:Jurnal Psikologi Indonesia*, *5*(02), 137-144. https://doi.org/10.30996/pers ona.v5i02.730.

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Bawenta, N. R. (2019). Hubungan Antara Pengetahuan Dan Sikap Dengan Perilaku Kesehatan Reproduksi Pada Peserta Didik Di Sma Negeri 3 Manado. *Jurnal KESMAS*, *8*(7), 344–351.

Department of Disease Control. (2020). Corona Virus Disease (COVID-19) Workup. *Department of Disease Control*, 2–5. https://ddc.moph.go.th/viralpneumonia/eng/index.php.

Dewi, I. P., & Fauziah, D.-. (2018). Pengaruh Terapi Seft Terhadap Penurunan Tingkat Kecemasan Pada Para Pengguna Napza. *Jurnal Keperawatan Muhammadiyah*, *2*(2). https://doi.org/10.30651/jkm.v2i2.1094.

Hasibuan, S. M., & Riyandi, T. R. (2019). Pengaruh Tingkat Gejala Kecemasan Terhadap Indeks Prestasi Akademik Pada Mahasiswa Angkatan 2016 Fakultas Kedokteran Universitas Muhammadiyah Sumatera Utara. *Jurnal Biomedik : Jbm*, *11*(3), 137–143. https://doi.org/10.35790/jbm.11.3.2019.26303.

Lisa Mutiara Anissa , Suryani, R. M. (2018). *TINGKAT KECEMASAN MAHASISWA KEPERAWATAN DALAM MENGHADAPI UJIAN BERBASIS COMPUTER BASED TEST Lisa Mutiara Anissa 1 , Suryani 1 , Ristina Mirwanti 1 1*. *16*(2), 67–75.

Masdar, H., Ayu Saputri, P., Rosdiana, D., & Chandra, F. (2016). Depresi, ansietas, dan stres serta hubungannya dengan obesitas pada remaja Relationship of depression, anxiety and stress with obesity in adolescent. *Jurnal Gizi Klinik Indonesia*, *12*(4), 138–143.

Mukhoirotin, D. (2016). Hubungan Pengetahuan dan Dukungan Keluarga dengan Kecemasan Menarche pada Remaja Putri. *Jurnal Fakultas Ilmu Kesehatan*, *3*(Dukungan Keluarga).

Muyasaroh, H. (2020). Kajian Jenis Kecemasan Masyarakat Cilacap dalam menghadapi Pandemi Covid 19. *LP2M UNUGHA Cilacap*.

Nadeak, D. natalia, Agrina, & Misrawati. (2014). Efektivitas promosi kesehatan melalui media audiovisual mengenai HIV AIDS terhadap peningkatan pengetahuan remaja tentang hiv aids. *Jurnal Online Mahasiswa*, 1–8. https://www.neliti.com/publications/186219/efektifitas-promosi-kesehatan-melalui-media-audiovisual-mengenai-hivaids-terhada.

Natalia, R. N., Malinti, E., & Elon, Y. (2020). Kesiapsiagaan Remaja Dalam Menghadapi Wabah Covid-19. *Jurnal Ilmiah Kesehatan Diagnosis*, *15*(2), 107–111.

Nurislaminingsih, R. (2020). Layanan Pengetahuan tentang COVID-19 di Lembaga Informasi. *Tik Ilmeu : Jurnal Ilmu Perpustakaan Dan Informasi*.

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https://doi.org/10.29240/tik.v4i1.1468.

Paramita, S., Mulawarman, U., Isnuwardana, R., Mulawarman, U., Rahmadi, A., & Mulawarman, U. (2020). *Balikpapan di Ambang Tiga Digit Kasus Terkonfirmasi Positif COVID-19 Balikpapan di Ambang Tiga Digit Kasus Terkonfirmasi Positif COVID-19*. *June*, 2–5. https://doi.org/10.13140/RG.2.2.15745.07520.

PH, L., Susanti, Y., & Putra, D. E. A. (2018). Hubungan Karakteristik Keluarga Dengan Tingkat Ansietas Saat Menghadapi Kekambuhan Pasien Gangguan Jiwa. *Indonesian Journal for Health Sciences*, *2*(1), 46. https://doi.org/10.24269/ijhs.v2i1.664.

Rochmania, B. K. (2017). Sikap Remaja Putri Dalam Menghadapi Perubahan Fisik Masa Pubertas. *Jurnal PROMKES*, *3*(2), 206. https://doi.org/10.20473/jpk.v3.i2.2015.206-217.

Saputri, K. M., Handayani, L. T., & Kurniawan, H. (2016). *Hubungan jenis kelamin dengan tingkat kecemasan pada pasien pre operasi di ruang bedah rs. baladhika husada jember*. *23*, 1–11. http://weekly.cnbnews.com/news/article.html?no=124000.

Setiawan, H., Suhanda, Sopatilah, E., Rahmat, G., Wijaya, D. D., & Ariyanto, H. (2018). Hubungan Tingkat Pengetahuan dengan Kecemasan Penderita Diabetes Mellitus. *Urecol*, 241–248.

Utami, Y. A. P. (2019). Hubungan Tingkat Pengetahuan Dengan Tingkat Kecemasan Remaja Dalam Menghadapi Menarche Pada Siswi Kelas V Dan Vi Di Sd Negeri 1 Ceper Klaten. *Jurnal Keperawatan*, *4*(1), 1–12. http://digilib.unmuhjember.ac.id/download.php?id=3456.

Wahyudi, I., Bahri, S., & Handayani, P. (2019). *Aplikasi Pembelajaran Pengenalan Budaya Indonesia*. *V*(1), 135–138. https://doi.org/10.31294/jtk.v4i2.

Winarti, A., Fatimah, F. S., & Rizky, W. (2017). Pengaruh Pendidikan Kesehatan Terhadap Kecemasan Tentang Menarche pada Siswi Kelas V Sekolah Dasar. *Jurnal Ners Dan Kebidanan Indonesia*, *5*(1), 51. https://doi.org/10.21927/jnki.2017.5(1).51-57.

Wulandari, A., Rahman, F., Pujianti, N., Sari, A. R., Laily, N., Anggraini, L., Muddin, F. I., Ridwan, A. M., Anhar, V. Y., Azmiyannoor, M., & Prasetio, D. B. (2020). Hubungan Karakteristik Individu dengan Pengetahuan tentang Pencegahan Coronavirus Disease 2019 pada Masyarakat di Kalimantan Selatan. *Jurnal Kesehatan Masyarakat Indonesia*. https://doi.org/10.26714/jkmi.15.1.2020.42-46.

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Artikel 3

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ORIGINAL ARTICLE

ASIA-PACIFIC PSYCHIATRY WILEY

Factors affecting the anxiety levels of adolescents in home-quarantine during COVID-19 pandemic in Turkey

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Abstract

Background: The long-term closing of schools and home-quarantine during the COVID-19 pandemic cause negative effects on the physical and mental health of young people. Studies evaluating the mental health of adolescents during the pandemic are limited in the literature.

Aim: In our study, it was aimed to determine the results of home-quarantine measures taken for adolescents during the pandemic and the affecting factors.

Method: This study was conducted as an online cross-sectional self-report questionnaire and included children aged between 12 and 18 years. The data were obtained from the children of volunteer families via Facebook family groups, and Google Forms questionnaires sent by the child psychiatry clinic to their smartphones. Sociodemographic form, State-Trait anxiety scale, and UCLA loneliness survey were used as data collection tools.

Results: We examined the data of 745 adolescents. The average age of the study group was 16.83 ± 1.66 years, and 69.5% were females. It was determined that 88.2% of the adolescents followed the developments in the COVID-19 process and obtained most information from the television. State anxiety was related to "Former psychiatric referral" by 4.39-fold, "Having a COVID positive patient in the family or your surroundings" by 3.81-fold, and "The most common medium for obtaining COVID-related information" by 2.41-fold.

Conclusions: Closure of schools and home-quarantine during pandemic causes anxiety and loneliness in young people. The identification of risky groups helps to properly support these individuals by various social connections, including healthcare professionals, families, and schools.

KEYWORDS
child psychiatry, coronavirus, distance education, lockdown, loneliness

1 | INTRODUCTION

Coronavirus, which began in Wuhan, China at the end of 2019 and soon spread to cause a pandemic, was first observed in Turkey on March 11, 2020. Many measures were taken to prevent the virus from spreading in Turkey following the first case: Schools were closed on March 12, 2020, and individuals under 20 years of age were forced to enter lockdown (Turkish Science Academy, 2020). According to UNESCO data, education has been suspended in 188 countries as of April 8, 2020, depriving more than 90% of students (1,5 billion young

Research Area: infant, child, and adolescent psychiatry; social psychiatry and epidemiology

people) of education worldwide (Lee, 2020). Education continued through alternative ways. In this context, the Ministry of Education courses online platform-Egitim Bilisim Agi (EBA-Network of Education Informatics) and a national television channel, TRT (Turkey Radio and Television Corporation), began to be used. Also, considering that these measures can cause psychological problems such as social distancing and anxiety and fear in young people, various psychosocial guides were prepared for students and families (Özer, 2020).

School routines are essential coping mechanisms, especially for young people with mental health problems. The length of the quarantine period, fear of infection, boredom, lack of information, being away from classmates and teachers, lack of personal space at home, and financial losses in the family cause stress in children and adolescents (Brazendale et al., 2017; Wang, Zhang, Zhao, Zhang, & Jiang, 2020). All these lifestyle changes may worsen the effects on young people's mental health and even lead to a problematic vicious cycle (Brooks et al., 2020). There is no official data on the number of symptomatic and asymptomatic individuals who are COVID-19 positive for under 18 years of age; also, children and adolescents may be asymptomatic if infected (Cai et al., 2020). For this reason, adults and adolescents can react differently to the Epidemic. Studies evaluating the mental health of adolescents during the pandemic are limited in the literature.

In our study, we aimed to determine the results of home-quarantine measures taken for adolescents during the pandemic and the factors affecting these results.

2 | METHOD

This study was conducted as an online cross-sectional self-report questionnaire and included children aged between 12 and 18 years. Data were obtained through Google Forms surveys (Google, California, USA) sent to individuals' smartphones through teachers and families from 13 different schools in Turkey/Sakarya.

3 | DATA COLLECTION TOOLS

3.1 | State-Trait Anxiety Inventory-STAI

Developed by Spielberger et al. (1983), the inventory has two 20-question scales. State Anxiety Inventory (STAI-S): It determines how the person feels at a certain time and condition. Trait Anxiety Scale (STAI-T): It determines how the person feels, regardless of the time and situation. The emotions or behaviors expressed on the STAI-S and STAI-T Scale are answered by choosing one of the "Not at all," "A little," "Somewhat," and "Very much so" options according to the severity of such experiences. The total score of the opposite expressive expressions is subtracted from the total score obtained for direct expressions, and a predetermined constant value is added to this number. The total value obtained shows the anxiety score of the individual. The total score value obtained from each scale varies between 20 and 80. The Turkish adaptation study was conducted by Öner and Le Compte, and the Cronbach alpha internal consistency coefficient of the scale was between 0.83 and 0.87, test-retest reliability was between 0.71 and 0.86, and item reliability was between 0.34 and 0.72 (Öner & LeCompte, 1985).

3.2 | UCLA loneliness scale

Developed by Russell, Peplau, and Cutrona (1980), it is a Likert-type self-assessment questionnaire that helps to determine the general loneliness of the individual. It has a four-point Likert-type rating with a total of 20 items, 10 of which do not contain positive loneliness, and the other 10 directed at identifying negative, namely, lonely individuals. The validity and reliability studies of the scale in our country were performed by Demir (1989). The Cronbach alpha internal consistency coefficient was calculated as 0.96, and the test-retest reliability coefficient was calculated as 0.94 (Demir, 1989).

3.3 | Statistical analysis

SPSS 22.0 package program was used for statistical analysis of the data. The results were expressed using mean ± SD, median (minimum-maximum), and number (%) for ease of understanding. The suitability of variables to normal distribution was examined using visual (histogram and probability graphs) and analytical methods (Kolmogorov-Smirnov/Shapiro-Wilk tests). Pearson correlation analysis was used for the correlations. Participants with state anxiety levels >+2SD separated from the group. Logistic regression analysis with backward elimination method including sociodemographic and clinical variables used to predict the group with high state anxiety. $P < .05$ was considered statistically significant.

3.4 | Ethics statement

Approval for the study was granted by the Sakarya University Ethical Committee with Approval no:71522473/050.01.04, dated April 27, 2020. All patients signed informed consent for participation in this study, and their anonymity is preserved.

4 | RESULTS

The data of 745 adolescents were examined in our study. The mean age of all participants was 16.83 ± 1.66 years, 69.5% of whom were females. The majority (53.7%) lived in the city center, and 85.8% attended high school. About 5.9% of participants had a chronic disease, 11.3% had previous psychiatric referrals, and 18.4% had a family member diagnosed with COVID-19. The sociodemographic and clinical data of the group are presented in Table 1.

TABLE 1 Sociodemographic and clinical data

Study parameters		(*n*: 745)
Age		16.83 ± 1.66
Gender		69.5% Females (*n*: 518)
Place of residence	Town/village	15.3 (*n*: 114)
	City center	53.7 (*n*: 400)
	District center	31.0 (*n*: 231)
Education levels	Secondary school	2.8% (*n*: 21)
	High school	85.8% (*n*: 639)
	University	11.4% (*n*: 85)
Attendance to distant learning		87.1% (*n*: 649)
Chronic diseases		5.9% (*n*: 44)
Previous psychiatric referral		11.3% (*n*: 84)
Those in need of psychiatric support during the pandemic		11.1% (*n*: 83)
Those with a family member diagnosed with COVID-19		18.4% (*n*:137)

TABLE 2 The distribution of information sources during the COVID-19 process

Study parameters		(*n*: 745)
Following the data regarding COVID-19		88.2% (*n*: 657)
Which source do you use to obtain information regarding COVID-19?	TV	48.7% (*n*: 363)
	Social media	35.0% (*n*: 261)
	Internet apart from social media (search engines, news sites, and so forth)	12.2% (*n*: 91)
	People I am in touch with	2.1% (*n*: 16)
	I do not follow COVID-19 from any information source	1.9% (*n*: 14)

About 88.2% of adolescents followed the developments in the COVID-19 process and obtained the most information from the television. The distribution of information sources during COVID-19 is presented in Table 2.

56.4% of the adolescents stated that the level of anxiety did not change after the information they obtained. In the quarantine process, 58.1% reported that they had health concerns. They most chose the "I am a little concerned" option regarding future school life, while 15.2% stated they were "very worried". Among all, 14.5% chose the "I am very worried" option regarding social and economic life. The change of anxiety levels in different areas related to COVID-19 is presented in Table 3. State, trait anxiety, and loneliness scale scores are shown in Table 4.

A positive correlation was detected between loneliness and state anxiety scale (*r*: 0.175, *P*: .001), and the trait anxiety scale (*r*: 0.194, *P*: .000). Correlation analysis between state, trait anxiety, and loneliness scales were presented in Table 5.

TABLE 3 The change of anxiety levels in different areas related to COVID-19

Study parameters	(*n*: 745)	
How did the information you obtained on COVID-19 affect your anxiety level?	It did not affect.	56.4% (*n*: 420)
	Increased my anxiety.	37.4% (*n*: 279)
	Decreased my anxiety.	6.2% (*n*: 46)
Did your health-related concerns increase during the quarantine?	Yes	58.1% (*n*: 433)
How concerned are you with the possible effects of COVID-19 disease on your future school life?	Somewhat worried	34.4% (*n*: 256)
	Significantly worried	26.7% (*n*: 199)
	Very worried	15.2% (*n*: 113)
	Not worried at all	12.6% (*n*: 94)
	A little worried	11.1% (*n*: 83)
What is your level of concern about the possible effects of COVID-19 on your future social life?	Somewhat worried	32.3% (*n*: 241)
	Significantly worried	19.3% (*n*: 144)
	A little worried	18.3% (*n*: 136)
	Not worried at all	15.6% (*n*: 116)
	Very worried	14.5% (*n*: 108)
What is your level of concern about the effect of COVID-19 disease on your and your family's future economic life?	Somewhat worried	26.3% (*n*: 196)
	Not worried at all	20.5% (*n*: 153)
	A little worried	20.3% (*n*: 151)
	Significantly worried	18.4% (*n*: 137)
	Very worried	14.5% (*n*: 108)

TABLE 4 State, trait anxiety and loneliness scale scores

Study parameters	(*n*: 745)
STAI-S	43.17 ± 5.86
STAI-T	51.53 ± 5.19
UCLA	41.89 ± 9.81

TABLE 5 Correlation analysis between state, trait anxiety, and loneliness scales

Study parameters		STAI-S	STAI-T	UCLA Loneliness
STAI-S	*r*	–	–	–
	P	–	–	–
STAI-T	*r*	–0.037	–	–
	P	.314	–	–
UCLA loneliness	*r*	0.175	0.194	–
	P	**.001**	**.001**	–

Logistic regression analysis was performed with the backward elimination method to determine the effects of chronic disease history, psychiatric referral history, COVID disease in the family, information sources, place of residence, age, education status, and loneliness on persistent anxiety score and state anxiety scale being above +2SD

TABLE 6 Logistic regression model with backward elimination method in patients grouped according to the state anxiety scale

Study parameters	χ^2	R^2	*P*	OR	%95 CI
Model	48.402	0.159	.022		
Previous psychiatric referral			.012	4.39	2.48-25.30
Having a COVID-19 positive patient in the family or entourage			.020	3.81	1.78-13.57
I mostly use the television to obtain information on COVID-19			.036	2.41	1.10-6.70

Abbreviations: CI, confidence interval; OR, odds ratio.

(*n*: 120). The logistic regression model was statistically significant (χ^2: 20.403, *P*: .022). The model explained 30.0% (Nagelkerke R^2) of the variance in the State anxiety scale and correctly classified 88.2% of the cases. Among the variables remaining in the model, it was found that "Previous psychiatric referral" was 4.39 times, "Having a COVID positive patient in the family or your environment" was 3.81 times, and "television as the most common source of information for COVID" was 2.41 times related (Table 6).

5 | DISCUSSION

In our study, the data of 745 adolescents were examined. The mean age of the study group was 16.83 ± 1.66 years, among which 69.5% were female. Participants mostly lived in the city center (53.7%), and 85.8% of them attended high school.

It was determined that 88.2% of the adolescents followed the developments in the COVID-19 process and obtained information mostly from television. During the pandemic, the agenda changes rapidly, and television and social media largely consist of news about the disease. Therefore, it is critical that the state establishes a close relationship with the media. However, some resources may not be appropriate in terms of public health policy (Fineberg, 2008). In our study, it was observed that the state anxiety scores increased 2.41 times more in the group, using mostly television as a source of information about COVID. These results show that exposing children to excessive information causes elevated levels of stress and anxiety. In a study conducted among families with children who went to school during the H1N1 pandemic, families stated that they received the most information from television, but 60% did not find it illuminating. Instead, they relied more on information provided by schools and healthcare units. The importance of understandability regarding compliance with the measures taken is emphasized in the same study. These results underline the importance of giving clear messages about home-quarantine and suggest that it may have a significant impact on compliance in controlling the outbreak (Kavanagh et al., 2011). Another study conducted after the SARS epidemic in Toronto showed that the factors which affect the confusion in the society stemmed from the differences in the style, approach, and content of the government's messages (DiGiovanni, Conley, Chiu, & Zaborski, 2004). The lack of clear information has led the public to think the worst and increase their anxiety (Desclaux, Badji, Ndione, & Sow, 2017). Since young people mostly use the television as a source of information, authorities need to work closely and coordinate well with this source to provide accurate and easy-to-understand information about preventive strategies.

Studies performed in the previous SARS and H1N1 pandemics reported an increase in fear, anxiety, and panic in the society (Zhu, Wu, Miao, & Li, 2008). Although there is much information about children's responses to trauma, data on their response to epidemics are limited. In many studies, side effects of psychological stress due to adverse events such as anxiety, depression, impaired social interaction, and decreased appetite have been reported in children (Klein, Devoe, Miranda-Julian, & Linas, 2009). Among our participants, 56.4% reported that their anxiety level did not change after the information they obtained, while concerns about health in the quarantine process were noted in 58.1%. Regarding future school life, participants mostly marked the "I am a little concerned" option (34.4%), while 15.2% reported that "They were very worried". Regarding social and economic life, 14.5% were "very worried." The anxiety and depression levels of 2330 students attending second and sixth grades were measured to determine the psychological effects of COVID-19 on children in China, and the rate of anxiety symptoms were reportedly 18.9% (Xie et al., 2020). In a preliminary study on 320 children and adolescents (168 females and 142 males) aged 3-18 years conducted in the second week of February 2020, psychological and behavioral problems such as distraction, nervousness, and fear of asking about the Epidemic were observed (Jiao et al., 2020). In another study involving 7143 university students, anxiety symptoms were not found in 75.1%. The rate of students with mild, moderate, and severe anxiety was 21.3%, 2.7%, and 0.9%, respectively. Another remarkable finding in this study is that living in the urban area was a protective factor from anxiety (Cao et al., 2020). The low rate of anxiety about economic life in our study may be due to our participants mostly living in the city center.

In their report published on January 26, 2020, the Chinese National Health Commission stated that people in the quarantine might experience emotions such as anxiety, discrimination, boredom, loneliness, guilt, and stigmatization after the SARS-CoV-2 infection (Lei et al., 2020). Our correlation analysis revealed positive correlations between loneliness and state (*r*: 0.175, *P*: .001) and trait anxiety scales. Sprang et al. showed that children who were isolated and quarantined during the pandemic developed adjustment and acute stress disorders, while 30% of children were diagnosed with posttraumatic stress disorder (Sprang & Silman, 2013). Loss of routines and reduced social and physical contact with others often cause distress, disappointment, and an annoying sense of isolation during quarantine (Hawryluck et al., 2004). Friendships are especially crucial for the healthy psychological development of children (World Health

Organization, 2004). In addition, schools have been providing mental health services to children and adolescents for a long time. Data from the National Survey of Drug Use and Health (NSDUH) show that children between the ages of 12 and 17 years have reduced access to mental health services with the closure of schools (Burns et al., 1995). On the other hand, children and young people are significantly affected by the emotional state of adults. Exposure to unexplained and unpredictable behavior of adults may cause an increase in the feeling of anxiety (Dalton, Rapa, & Stein, 2020). They may refrain from sharing their feelings to ensure that they do not have emotion-oriented conversations, cause anxiety about the condition of adults, deal with their concerns, and that they protect others (Dalton et al., 2019). This can make young people feel lonely in their family. Parents' talking to the youth and establishing a sensitive and effective communication about the disease have great benefits in terms of the mental health of adolescents.

COVID-19 pandemic can worsen existing mental health problems (Golberstein, Gonzales, & Meara, 2019). In our study, it was determined that the state anxiety scores were 4.39 times higher in adolescents who were previously referred for psychiatric treatment. One of the reasons that led to this consequence is that economic downturns and unemployment of parents can affect parental mental health so that they can mistreat their children. This may lead to increased mental health problems in young people. Adolescents are generally healthy individuals. They do not need care other than regular follow-ups due to their chronic diseases. However, ignoring the immediate and psychological effects of the current situation can lead to more serious health and social problems (Shevlin et al., 2020). Understanding their reactions and emotions is particularly important in meeting their needs and may help to reduce anxiety and depressive symptom in home-quarantine times.

Having a positive COVID positive patient in or around the family caused a 3.81-fold increase in state anxiety scores. In the study conducted in England, the risk of getting infected reportedly increased the likelihood of anxiety and depression (Ko, Yen, Yen, & Yang, 2006). Higher levels of anxiety and depression were detected in people who were quarantined during the SARS outbreak due to suspicion of infection (Norredam, Nellums, Nielsen, Byberg, & Petersen, 2018). Another reason is that a COVID positive family member necessitates the isolation of the family. Separation from loved ones causes a crisis in young people and may increase the risk of psychiatric disorders (Golberstein, Wen, & Miller, 2020).

Our study has some limitations. Mental health assessment was based on self-report reports instead of clinician interviews. This may lead to higher reporting rates of psychiatric symptoms. Another limitation is that the social and economic conditions of families were not evaluated in our study. The condition of the family during a pandemic may render children more vulnerable.

6 | CONCLUSION

In our study, anxiety and loneliness levels of young people between the ages of 12-18 years were examined, and some affecting factors were discussed. During the pandemic, the closure of schools and home-quarantine increases the level of anxiety and loneliness among young people. The identification of risky groups helps to properly support these individuals by various social connections, including healthcare professionals, families, and schools.

CONFLICT OF INTEREST

The authors have no affiliations or financial interests that might pose a conflict of interest. The authors alone are responsible for the content and writing of the paper.

AUTHOR CONTRIBUTIONS

S.K., O.K.: conceptualization, data collection, and writing; M.B.U.: statistical analysis, supervision, and writing; G.M., A.A.: conceptualization, data collection, and writing.

DATA AVAILABILITY STATEMENT

The data that support the findings of this study are available from the corresponding author, M.B.U., upon reasonable request.

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REFERENCES

Brazendale, K., Beets, M. W., Weaver, R. G., Pate, R. R., Turner-McGrievy, G. M., Kaczynski, A. T., … von Hippel, P. T. (2017). Understanding differences between summer vs. school obesogenic behaviors of children: The structured days hypothesis. *International Journal of Behavioral Nutrition and Physical Activity*, *14*(1), 100. https://doi.org/10.1186/s12966-017-0555-2

Brooks, S. K., Webster, R. K., Smith, L. E., Woodland, L., Wessely, S., Greenberg, N., & Rubin, G. J. (2020). The psychological impact of quarantine and how to reduce it: Rapid review of the evidence. *The Lancet*, *395*(10227), 912–920. https://doi.org/10.1016/s0140-6736(20)30460-8

Burns, B. J., Costello, E. J., Angold, A., Tweed, D., Stangl, D., Farmer, E. M., & Erkanli, A. (1995). Children's mental health service use across service sectors. *Health Affairs*, *14*(3), 147–159.

Cai, J., Xu, J., Lin, D., Yang, Z., Xu, L., Qu, Z., … Zeng, M. (2020). A case series of children with 2019 novel coronavirus infection: Clinical and epidemiological features. *Clinical infectious diseases: an official publication of the Infectious Diseases Society of America*, ciaa198. https://doi.org/10.1093/cid/ciaa198

Cao, W., Fang, Z., Hou, G., Han, M., Xu, X., Dong, J., & Zheng, J. (2020). The psychological impact of the COVID-19 epidemic on college students in China. *Psychiatry Research*, *287*, 112934. https://doi.org/10.1016/j.psychres.2020.112934

Dalton, L., Rapa, E., & Stein, A. (2020). Protecting the psychological health of children through effective communication about COVID-19. *The Lancet Child & Adolescent Health*, *4*(5), 346–347. https://doi.org/10.1016/s2352-4642(20)30097-3

Dalton, L., Rapa, E., Ziebland, S., Rochat, T., Kelly, B., Hanington, L., … Grp, C. E. (2019). Communication with children and adolescents about the diagnosis of a life-threatening condition in their parent. *Lancet*, *393*(10176), 1164–1176. https://doi.org/10.1016/S0140-6736(18)33202-1

Demir, A. (1989). UCLA yalnızlık ölçeğinin geçerlik ve güvenirliği. *Psikoloji Dergisi*, *7*(23), 14–18.

Desclaux, A., Badji, D., Ndione, A. G., & Sow, K. (2017). Accepted monitoring or endured quarantine? Ebola contacts' perceptions in Senegal. *Social Science & Medicine*, *178*, 38–45. https://doi.org/10.1016/j.socscimed.2017.02.009

DiGiovanni, C., Conley, J., Chiu, D., & Zaborski, J. (2004). Factors influencing compliance with quarantine in Toronto during the 2003 SARS outbreak. *Biosecurity and Bioterrorism*, *2*(4), 265–272. https://doi.org/10.1089/bsp.2004.2.265

Fineberg, H. V. (2008). Preparing for avian influenza: Lessons from the "swine flu affair". *Journal of Infectious Diseases*, *197*(Suppl 1), S14–S18. https://doi.org/10.1086/524989

Golberstein, E., Gonzales, G., & Meara, E. (2019). How do economic downturns affect the mental health of children? Evidence from the National Health Interview Survey. *Health Economics*, *28*(8), 955–970.

Golberstein, E., Wen, H., & Miller, B. F. (2020). Coronavirus disease 2019 (COVID-19) and mental health for children and adolescents. *JAMA Pediatrics*. https://doi.org/10.1001/jamapediatrics.2020.1456

Hawryluck, L., Gold, W. L., Robinson, S., Pogorski, S., Galea, S., & Styra, R. (2004). SARS control and psychological effects of quarantine, Toronto, Canada. *Emerging Infectious Diseases*, *10*(7), 1206–1212. https://doi.org/10.3201/eid1007.030703

Jiao, W. Y., Wang, L. N., Liu, J., Fang, S. F., Jiao, F. Y., Pettoello-Mantovani, M., & Somekh, E. (2020). Behavioral and emotional disorders in children during the COVID-19 epidemic. *The Journal of Pediatrics*, *221*, 264–266.e1. https://doi.org/10.1016/j.jpeds.2020.03.013

Kavanagh, A. M., Bentley, R. J., Mason, K. E., McVernon, J., Petrony, S., Fielding, J., … Studdert, D. M. (2011). Sources, perceived usefulness and understanding of information disseminated to families who entered home quarantine during the H1N1 pandemic in Victoria, Australia: A cross-sectional study. *BMC Infectious Diseases*, *11*(1), 2. https://doi.org/10.1186/1471-2334-11-2

Klein, T. P., Devoe, E. R., Miranda-Julian, C., & Linas, K. (2009). Young children's responses to September 11th: The new York City experience. *Infant Mental Health Journal*, *30*(1), 1–22. https://doi.org/10.1002/imhj.20200

Ko, C. H., Yen, C. F., Yen, J. Y., & Yang, M. J. (2006). Psychosocial impact among the public of the severe acute respiratory syndrome epidemic in Taiwan. *Psychiatry and Clinical Neurosciences*, *60*(4), 397–403. https://doi.org/10.1111/j.1440-1819.2006.01522.x

Lee, J. (2020). Mental health effects of school closures during COVID-19. *Lancet Child Adolescent Health*, *4*(6), 421. https://doi.org/10.1016/S2352-4642(20)30109-7

Lei, L., Huang, X., Zhang, S., Yang, J., Yang, L., & Xu, M. (2020). Comparison of prevalence and associated factors of anxiety and depression among people affected by versus people unaffected by quarantine during the COVID-19 epidemic in southwestern China. *Medical Science Monitor*, *26*, e924609. https://doi.org/10.12659/MSM.924609

Norredam, M., Nellums, L., Nielsen, R. S., Byberg, S., & Petersen, J. H. (2018). Incidence of psychiatric disorders among accompanied and unaccompanied asylum-seeking children in Denmark: A nation-wide register-based cohort study. *European Child & Adolescent Psychiatry*, *27*(4), 439–446. https://doi.org/10.1007/s00787-018-1122-3

Öner, N., & LeCompte, W. A. (1985). *Durumluk-sürekli kaygı envanteri el kitabı*, Istanbul, Turkey: Boğaziçi Üniversitesi Yayınları.

Özer, M. (2020). Türkiye'de COVID-19 Salgını Sürecinde Milli Eğitim Bakanlığı Tarafından Atılan Politika Adımları. *Kastamonu Eğitim Dergisi*, *28*(3), 1124–1129. https://doi.org/10.24106/kefdergi.722280

Russell, D., Peplau, L. A., & Cutrona, C. E. (1980). The revised UCLA loneliness scale: Concurrent and discriminant validity evidence. *Journal of Personality and Social Psychology*, *39*(3), 472–480. https://doi.org/10.1037//0022-3514.39.3.472

Shevlin, M., McBride, O., Murphy, J., Miller, J. G., Hartman, T. K., Levita, L., Mason, L., Martinez, A. P., McKay, R., & Stocks, T. V. (2020). *Anxiety, depression, traumatic stress, and COVID-19 related anxiety in the UK General Population during the COVID-19 pandemic (preprint)*. Retrieved from psyarxiv.com/hb6nq.

Spielberger, C. D. (1983). *Manual for the StateTrait Anxiety Inventory (Form Y)*, Palo Alto, California: Consulting Psychologists Press.

Sprang, G., & Silman, M. (2013). Posttraumatic stress disorder in parents and youth after health-related disasters. *Disaster Medicine and Public Health Preparedness*, *7*(1), 105–110. https://doi.org/10.1017/dmp.2013.22

Turkish Science Academy. (17 Nisan 2020). *Covid-19 Pandemi Değerlendirme Raporu* (978–605-2249-43-7). (Türkiye Bilimler Akademisi Yayınları, Issue). http://www.tuba.gov.tr/.

Wang, G., Zhang, Y., Zhao, J., Zhang, J., & Jiang, F. (2020). Mitigate the effects of home confinement on children during the COVID-19 outbreak. *Lancet*, *395*(10228), 945–947. https://doi.org/10.1016/S0140-6736(20)30547-X

World Health Organization. (2004). The importance of caregiver-child interactions for the survival and healthy development of young children: A review.

Xie, X., Xue, Q., Zhou, Y., Zhu, K., Liu, Q., Zhang, J., & Song, R. (2020). Mental health status among children in home confinement during the coronavirus disease 2019 outbreak in Hubei Province, China. *JAMA Pediatrics*. https://doi.org/10.1001/jamapediatrics.2020.1619

Zhu, X., Wu, S., Miao, D., & Li, Y. (2008). Changes in emotion of the Chinese public in regard to the Sars period. *Social Behavior and Personality: An International Journal*, *36*(4), 447–454. https://doi.org/10.2224/sbp.2008.36.4.447

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Research paper

Prevalence and risk factors for anxiety symptoms during the outbreak of COVID-19: A large survey among 373216 junior and senior high school students in China

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ABSTRACT

Background: The increasing menace of the COVID-19 epidemic led to an atmosphere of anxiety around the world, however the evidence among Chinese students aged 12 to 18 years has been limited.
Methods: A total of 373216 junior and senior high school students were recruited using a cluster sampling method in Zhengzhou, Xinxiang, Xinyang city of Henan Province, China, during February 4-12, 2020. Presence of anxiety symptoms was determined by Generalized Anxiety Disorder tool (GAD-7). Multiple logistic regression was performed to estimate the potential risk factors.
Results: Among the participants, junior and senior high school students were found to have anxiety symptoms, producing an overall prevalence of 9.89%. The prevalence was lower in female than in male (9.66% vs. 10.11%) and the prevalence was higher for junior high school students than senior high school students (13.89% vs. 12.93%). The prevalence of anxiety symptoms was highest among rural students and lowest among urban students (11.33% vs. 8.77%). The cognitive level was negatively associated with the prevalence of anxiety symptoms. After adjusting for potential confounders, age, gender, residential location, worried level, fear level and behavior status were found to be associated with anxiety symptoms.
Limitations: Prevalence may be skewed by assessing anxiety symptoms using self-reported scales rather than clinical interviews.
Conclusions: This large-scale study assesses the prevalence of anxiety symptoms and its potential influencing factors in junior and senior high school students. These findings suggest that governments need to pay more attention to the mental health of young people in combating COVID-19.

1. Introduction

In December 2019, a novel coronavirus (COVID-19) has been identified (Lu et al., 2020), which raised global concern (Wang et al., 2020a). It spreads widely and rapidly and causes an outbreak of acute infectious pneumonia (Bao et al., 2020). Given its high person-to-person transmission rate, multiple appropriate measures (including social distancing, quarantine, and isolation) were implemented in many cities and rural areas in China during the Spring Festival. Although many measures might have moderated the spread of severe acute respiratory syndrome coronavirus Type 2 (SARS-COV-2), which causes COVID-19, they can also have a negative impact on the economy, employment, and public health (Brooks et al., 2020). The increasing menace of the epidemic led to an atmosphere of anxiety around the world due to disrupted travel plans, social isolation, media information overload and panic buying of necessity goods (Ho et al., 2020).

Anxiety disorders are one of the most common and disabling mental health conditions that are distributed across the globe (Baxter et al., 2013, 2014; Kessler et al., 2007; Whiteford et al., 2010; Wittchen et al., 2010). In addition, the previous study had reported anxiety disorders

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may increase the risk of cancer, cardiovascular disease and some forms of anxiety have been associated with a lower risk of death (Batelaan et al., 2016; Eaton et al., 2013; Miloyan et al., 2016; Mykletun et al., 2009; Wang et al., 2020c). It is already evident that the direct and indirect psychological and social effects of the COVID-19 pandemic are widespread and could affect mental health now and future (González-Sanguino et al., 2020; Holmes et al., 2020; Khadse et al., 2020; Mattila et al., 2021; Stepowicz et al., 2020). The increasing number of confirmed cases and the growing number of provinces and countries affected by the outbreak have contributed to the increasing prevalence of public anxiety (Li et al., 2020). However, the effects of the COVID-19 pandemic on mental health could differ between population groups (Pan et al., 2020). Although there is growing empirical evidence of mental health complications of COVID-19 in adults, our knowledge of the impact of the pandemic on the mental health of young people remains very limited (Nearchou et al., 2020). In particular, adolescents are a vulnerable group that is presenting with more and more complex issues (Membride, 2016). Additionally, there is more and more evidence that the prevalence of adolescent emotional disorders is increasing (Glowinski and D'Amelio, 2016). The study indicated that most universal, selective, and indicated prevention programs are effective in reducing symptoms of anxiety in adolescents (Neil and Christensen, 2009).

As a province with the largest educational population in China, Henan province has an educational population of 28.53 million. It has a border with Hubei province and the two provinces have close exchanges with each other. The situation of epidemic prevention and control in the education system is very serious. Therefore, the present study included 373216 junior and senior high school students in Henan Province during the COVID-19 outbreak and aimed to assess the prevalence of anxiety symptoms and identify the potential risk and protective factors contributing to anxiety. According to past experience, winter and spring are likely to be the peak of the outbreak. Therefore, from the perspective of current global epidemic prevention and control, the Spring Festival in 2021 will still be affected by COVID-19. This may assist government agencies and healthcare professionals in safeguarding the psychological well-being of the junior and senior high school students in the face of COVID-19 outbreak expansion in China and different parts of the world.

2. Methods

2.1. Study participants

We conducted this cross-sectional study in order to investigate the impact of the COVID-19 pandemic on the anxiety symptoms from February 4, 2020 and February 12, 2020. Junior and senior high school students aged 12-18 years were recruited by using a cluster sampling method in Zhengzhou, Xinxiang, Xinyang city of Henan Province, China, and invited to participate in the online survey through an online survey platform ("SurveyStar", Changsha Ranxing Science and Technology, Shanghai, China). After excluding the data of participants aged<12 years or aged>18 years or those who took ≤100 s to fully respond to the questions (n = 34276), finally, a total of 373216 participants were included in the analysis. These regions can represent the overall conditions of Henan Province.

2.2. Data collection

A standard questionnaire was designed to collect basic sociodemographic information (sex, age, grade, and residential location), the cognitive level was reflected to the subjects' understanding of the epidemic characteristics of the COVID-19, including "will it be passed from person to person", "route of transmission", and "quarantine for several days after exposure", each of these questions was divided into two groups: correct and wrong, mental state (worry and fear), a specific anxiety symptoms and other factors. Residential location was divided into 3 categories: city, rural and country-level city. The worried and fear levels (including "extremely" "very" "somewhat"' "not so" and "not at all"), assigned a score to each response on 5-point Likert scale (Gupta and Maity, 2021). High level was defined as 4-5 points, moderate level was defined as 3 points, and low or none level was defined as 1-2 points. Behavioral status reflected the change of people's lifestyle after knowing about the epidemic, which including "whether to increase the frequency of hand washing", "going out wearing a mask", "whether to give up the Spring Festival to visit relatives or travel because of the epidemic", and "going out for dinner". Behavioral status was divided into 3 levels: all correct, not all correct and all wrong (Li et al., 2020).

Anxiety symptoms were assessed by using the Chinese version of Generalized Anxiety Disorder tool (GAD-7) which is a simple and highly effective self-assessment tool for anxiety symptoms (Löwe et al., 2008). Participants were asked how often seven symptoms had appeared in your life over the past two weeks on a 21-point scale ranging from "not at all" (0 points), "several days" (1 points), "more than half the days" (2 points) and "nearly every day" (3 points). The scores for symptom severity were 5–9 for mild, 10–14 for moderate, and 15–21 for severe (Spitzer et al., 2006). A score of 10 or greater on the GAD-7 represents a reasonable cut point for identifying cases of GAD (Li et al., 2020).

2.3. Statistical analysis

Continuous variables were shown as means ± standard deviation

Table 1
Characteristics of the study participants by anxiety status.

Characteristics	All participants n=373216	No-anxiety n=336298	Anxiety n=36918	P value
Age (years)	15.24±1.59	15.26±1.60	15.06±1.58	0.009
Gender (%)				<0.001
Male	193507(51.85)	173943 (51.72)	19564 (52.99)	
Female	179709(48.15)	162355 (48.28)	17354 (47.01)	
Grade (%)				<0.001
Junior	244193(65.43)	217703 (64.74)	26490 (71.75)	
Senior	129023(34.57)	118595 (35.26)	10428 (28.25)	
Residential location				<0.001
City	161576(43.29)	147405 (43.83)	14171 (38.39)	
Rural	140737(37.71)	124794 (37.11)	15943 (43.18)	
Country-level city	70903(19.00)	64099(19.06)	6804(18.43)	
Worried level (%)				<0.001
High	284399(76.20)	250130 (74.38)	34269 (92.82)	
Moderate	66182(17.73)	64195(19.09)	1987(5.38)	
Low/none	22635(6.06)	21973(6.53)	662(1.79)	
Fear level (%)				<0.001
High	194047(51.99)	162755 (48.40)	31292 (84.76)	
Moderate	128397(34.40)	124308 (36.96)	4089(11.08)	
Low/none	50772(13.60)	49235(14.64)	1537(4.16)	
Behavior status (%)				<0.001
All correct	185958(49.83)	167570 (49.83)	18388 (49.81)	
Not all correct	186662(50.01)	168222 (50.02)	18440 (49.95)	
All wrong	596(0.16)	506(0.15)	90(0.24)	

Data were presented as mean (SD) normal distribution continuous variables and numbers (percentages) for categorical variables; P values calculated using student's t-test and chi-square.
Compared with No-anxiety, P <0.05

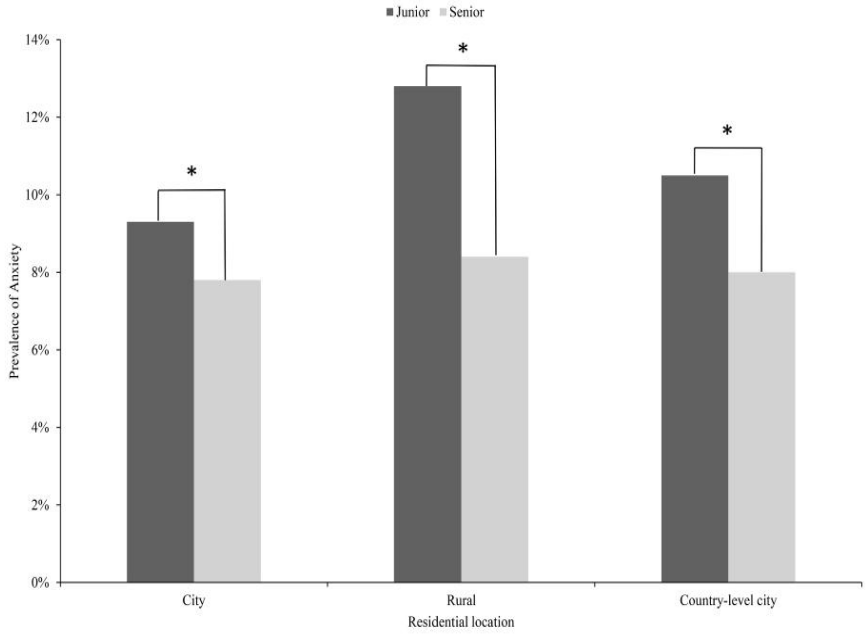

Fig. 1.

(SD), and categorical variables were expressed as frequencies (%). Student's t-tests were performed to examine the difference in continuous variables, and the significance of the difference in categorical variables was assessed by chi-squared test.

The logistic regression model was used to estimate odds ratios (ORs) and 95% confidence intervals (CIs). Multivariable adjustment modelling was performed in this study: Model 1 was crude model. Model 2 was adjusted for age, gender, residential location, worried level, fear level and behavior status. All data were analyzed using SPSS and Excel and software version 21.0 (SPSS Inc., Chicago) and two-tailed P values <0.05 were considered statistically significant.

3. Results

3.1. Basic characteristics of participants

Among 373216 participants included 244193 junior high school students and 129023 senior high school students (12-18 years old) were invited to participate in the online survey during the outbreak of COVID-19 in China. Table 1 showed the characteristics of participants and their associations with anxiety status. As compared to participants without anxiety symptoms, participants with anxiety symptoms were different from the proportion of sex, grade, residential location, worried level, fear level and behavior status (all $P<0.05$).

3.2. Prevalence of anxiety symptoms

The overall anxiety symptoms prevalence was 9.89% among junior and senior high school students during COVID-19 pandemic in China. The prevalence was lower in females than males (9.66% vs. 10.11%). Fig. 1 showed the prevalence of anxiety symptoms in participants by residential location and grade. The highest prevalence of anxiety symptoms was 12.80% found in participant lived in rural among junior high school students, and 8.40% found in participant lived in rural among senior high school students. The lowest prevalence of anxiety symptoms was 9.30% found in participant lived in city among junior high school students, and 7.80% found in participant lived in city among senior high school students. In brief, during the COVID-19 period, the

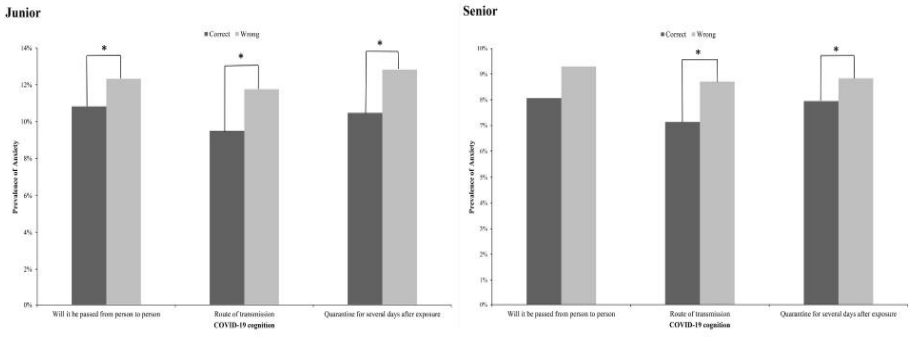

Fig. 2.

Table 2
The rate of different severities of anxiety symptoms.

Anxiety level	All participants		Junior students		Senior students	
	n	%	n	%	n	%
None	229811	61.58	149193	61.10	80618	62.48
Mild	106487	28.53	68510	28.06	37977	29.43
Moderate	25332	6.79	17949	7.35	7383	5.72
Severe	11586	3.10	8541	3.50	3045	2.36
Mild to serve	143405	38.42	95000	38.90	48405	37.51

proportion of junior high school students with anxiety symptoms was higher than that of senior high school students. Participants lived in city have the lowest prevalence of anxiety symptoms and participants lived in rural have the highest prevalence of anxiety symptoms among junior and senior high school students.

Fig. 2 showed the three most basic cognitive problems associated with the COVID-19. As can be seen from the figure, there is a difference in the prevalence of anxiety symptoms between those who answered the cognitive questions correctly and those who answered them incorrectly, in junior and senior high school students respectively. Students who lacked correct recognition of the COVID-19 were more prone to anxiety symptoms.

3.3. Anxiety symptoms

The proportion of students with different levels of anxiety symptoms were shown in Table 2. Mild and moderate anxiety were most common. In junior high school students, the rate of mild anxiety was 28.06%, and that of moderate anxiety was 7.35%. Similarly, in senior high school students, the rate of mild anxiety was 29.43%, and that of moderate anxiety was 5.72%.

Fig. 3 showed there was a difference in response rates among the seven GAD symptoms in anxiety participants. Obviously, being so restless that it is hard to sit still (41.2%), becoming easily annoyed or irritable (49.1%), feeling afraid as if something awful might happen (39.4%) are the most common symptoms.

3.4. The positive or risk factors of anxiety symptoms

Table 3 presented the results of multivariable logistic regression analysis. Compared with male among junior and senior high school students, female had 8% [OR 0.92 (95% CI; 0.89-0.94)] and 16% [OR 0.84 (95% CI; 0.81-0.88)] reduced odds of anxiety. In junior high school students, compared with participants lived in city, participants lived in rural had 30% increased likelihood (OR 1.30 [95% CI 1.26–1.34]), just like participants lived in country-level city had 11% increased likelihood (OR 1.11[95% CI 1.07-1.15]). Compared with high worry level among junior and senior high school students, moderate worry level had 40% [OR 0.60 (95% CI; 0.56-0.64)] and 34% [OR 0.66 (95% CI; 0.61-0.73)] reduced odds of anxiety, low/none worry level had 39% [OR 0.61 (95% CI; 0.55-0.68)] and 22% [OR 0.78 (95% CI; 0.67-0.92)] reduced odds of anxiety. Similarly, compared with high fear level among junior and senior high school students, moderate fear level had 79% [OR 0.21 (95% CI; 0.20-0.22)] and 80% [OR 0.20 (95% CI; 0.19-0.21)] reduced odds of anxiety, low/none fear level had 79% [OR 0.21 (95% CI; 0.20-0.23)] and 81% [OR 0.19 (95% CI; 0.17-0.21)] reduced odds of anxiety. However, compared with high behavior status level among junior and senior high school students, moderate behavior status level had 4% increased likelihood (OR 1.04 [95% CI 1.01-1.07]) and 6% increased likelihood (OR 1.06 [95% CI 1.01-1.10]), just like low behavior status level had 172% increased likelihood (OR 2.72[95% CI 2.01-3.68]) and 193% increased likelihood (OR 2.93[95% CI 1.97-4.35]).

4. Discussion

This was a large-scale cross-sectional epidemiological study based in Henan Province, which has the largest educational population in China, investigating the prevalence of anxiety symptoms in 373,216 junior and

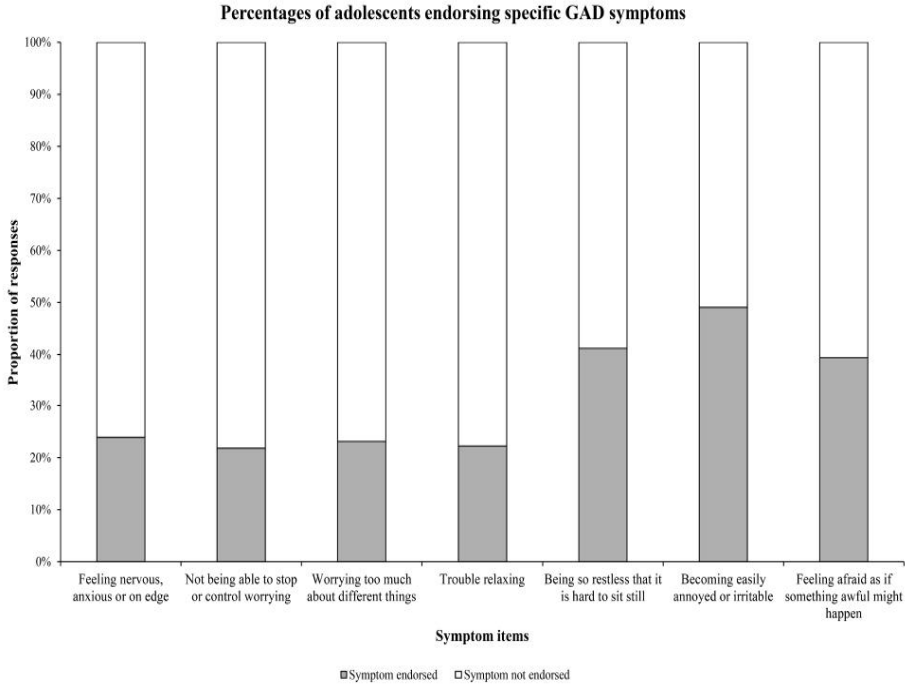

Fig. 3.

Table 3
Independent association of characteristics of study participants and anxiety during the COVID-19 epidemic in Henan province.

Characteristics	All participants OR (95%CI)		Junior students OR (95%CI)		Senior students OR (95%CI)	
	Model 1	Model 2	Model 1	Model 2	Model 1	Model 2
Gender						
Male	1.00 (ref)	1.00 (ref)	1.00 (ref)	1.00 (ref)	1.00 (ref)	1.00 (ref)
Female	0.95 (0.93-0.97)*	0.89 (0.87-0.91)*	0.96 (0.93-0.98)*	0.92 (0.89-0.94)*	0.94 (0.90-0.98)*	0.84 (0.81-0.88)*
Residential location						
City	1.00 (ref)	1.00 (ref)	1.00 (ref)	1.00 (ref)	1.00 (ref)	1.00 (ref)
Rural	1.33 (1.30-1.36)*	1.20 (1.17-1.23)*	1.44 (1.40-1.48)*	1.30 (1.26-1.34)*	1.08 (1.03-1.13)*	0.97 (0.93-1.02)
Country-level city	1.10 (1.07-1.14)*	1.06 (1.03-1.10)*	1.15 (1.11-1.20)*	1.11 (1.07-1.15)*	1.03 (0.98-1.09)	1.00 (0.94-1.05)
Worried level						
High	1.00 (ref)	1.00 (ref)	1.00 (ref)	1.00 (ref)	1.00 (ref)	1.00 (ref)
Moderate	0.23 (0.22-024)*	0.62 (0.59-0.65)*	0.22 (0.21-0.23)*	0.60 (0.56-0.64)*	0.24 (0.22-0.26)*	0.66 (0.61-0.73)*
Low/none	0.22 (0.20-0.24)*	0.66 (0.60-0.72)*	0.20 (0.18-0.22)*	0.61 (0.55-0.68)*	0.26 (0.23-0.30)*	0.78 (0.67-0.92)*
Fear level						
High	1.00 (ref)	1.00 (ref)	1.00 (ref)	1.00 (ref)	1.00 (ref)	1.00 (ref)
Moderate	0.17 (0.17-0.18)*	0.20 (0.20-0.21)*	0.17 (0.17-0.18)*	0.21 (0.20-0.22)*	0.18 (0.17-0.19)*	0.20 (0.19-0.21)*
Low/none	0.16 (0.15-0.17)*	0.20 (0.19-0.21)*	0.16 (0.15-0.17)*	0.21 (0.20-0.23)*	0.17 (0.15-0.18)*	0.19 (0.17-0.21)*
Behavior status						
All correct	1.00 (ref)	1.00 (ref)	1.00 (ref)	1.00 (ref)	1.00 (ref)	1.00 (ref)
Not all correct	1.00 (0.98-1.02)	1.04 (1.02-1.07)*	1.00 (0.97-1.02)	1.04 (1.01-1.07)*	1.00 (0.96-1.04)	1.06 (1.01-1.10)*
All wrong	1.62 (1.29-2.03)*	2.80 (2.20-3.56)*	1.53 (1.16-2.03)*	2.72 (2.01-3.68)*	1.87 (1.28-2.72)*	2.93 (1.97-4.35)*

Abbreviation: OR, odds ratio; CI, confidence interval.
Model 1: no adjustment.
Model 2: adjusted for age, gender, residential location, worried level, fear level and behavior status.
* P<0.05.

senior high school students during the COVID-19 outbreak. Our study showed that the overall prevalence of anxiety symptoms in junior and senior high school students was 9.89% (10.85% for junior high school students and 8.08% for senior high school students). Age, gender, grade, residential location, worried level, fear level and behavior status were found to be associated with anxiety symptoms among junior and senior high school students.

Given an overall global prevalence of anxiety disorders estimated to be normally around 7.3% (Santabárbara et al., 2020), however, our results suggest that anxiety symptoms prevalence in junior and senior high school students was 9.89% during the COVID-19 outbreak. It might be caused by epidemic prevention and control measures during COVID-19 period. At the beginning of the COVID-19 outbreak in China, about one-third reported moderate-to-severe anxiety. Female gender, student status, and specific physical symptoms were associated with a greater psychological impact of the outbreak and higher levels of stress, anxiety, and depression (Wang et al., 2020b). Another data showed that a large-scale survey of college students in China demonstrates that about 45% students have probable acute stress, anxiety or depressive symptoms during the COVID-19 epidemic (Ma et al., 2020). As is supposed above, the anxiety symptoms are likely to affect more populations during this pandemic, and we should try to assess the impact of COVID-19 on other vulnerable populations, such as adolescents, to maintain the mental health of vulnerable populations.

Our study showed that participants who lived in city have the lowest prevalence of anxiety and participants who lived in rural have the highest prevalence of anxiety among junior and senior high school students. It may be because the high level of socioeconomic status of urban student's parents. A large body of study have shown that socioeconomic status has a strong protective effect on physical and mental health outcomes (Burgard et al., 2013; Dowd et al., 2011; Morris et al., 1994). Parents' emotions can affect their children. Meanwhile, the prevalence of anxiety in junior high school students is higher than that in senior high school students. Therefore, we should pay more attention to protect the psychological status of rural students, by developing interventions and prevention and control measures. The prevalence of anxiety was also significantly higher among students with low cognition. This suggests that we need to strengthen the promotion of COVID-19 knowledge, especially in the transmission route, where the awareness rate is low. Through publicity and education, students can have a more comprehensive understanding of COVID-19, so as to protect themselves from life habits such as hand washing, exercise and nutrition, and reduce the influence of COVID-19 on anxiety among students.

Moreover, we subdivided the level of anxiety, and the results showed that most students were mild anxiety, while only a few students were moderate to severe anxiety. Of note, among the anxious students, being so restless that it is hard to sit still (41.2%), becoming easily annoyed or irritable (49.1%), feeling afraid as if something awful might happen (39.4%) are the most common symptoms. So, we suggested that the health department could provide an online psychological intervention platform where students can seek online psychological support when they have the above three symptoms.

To our knowledge, this is a large sample study of the prevalence of anxiety symptoms in junior and senior high school students. Secondly, as a province with the largest education population in China, Henan province has a border with Hubei province and close contacts between the two provinces, which is representative of students' anxiety during the period of the COVID-19. Thirdly, we used the standardized questionnaire (GAD-7) to diagnose anxiety. Finally, we excluded the participants who not meeting the requirements of this study to make our results more realistic.

Nevertheless, there are some limitations that should be considered when interpreting our results. First, although many important variables were already considered and adjusted, the possibility of other potential confounding factors remain cannot be ruled out. Second, prevalence may be skewed by assessing anxiety symptoms using self-reported scales rather than clinical interviews. Third, the presence of anxiety symptoms was determined by Generalized Anxiety Disorder tool (GAD-7), which is a simple and highly effective self-assessment tool for anxiety symptoms. However, a single screening tool does not guarantee the reliability and validity of the study. Fourth, the cognitive level reflected the subjects' understanding of the epidemic characteristics of the COVID-19, but the validity of the cognitive level has not been guaranteed. Finally, the participants in this study were junior and senior high school students, which may limit the extension of our findings to other grade students.

In conclusion, among junior and senior high school students in China, rate of anxiety symptoms was not optimal during the COVID-19 epidemic, especially for students living in rural areas. These findings suggest that governments need to pay more attention to the mental health of young people in combating COVID-19. In the follow-up work, factors including age, gender, grade, residential location, cognitive level, worried level, fear level, and behavior status may be considered as

part of the overall management of anxiety symptoms.

Declaration of Competing Interest

The authors declare that they have no conflict of interest.

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Author statement

Qingqing Xu and Zhenxing Mao designed research; Hualiang Lin, Xian Wang, Xiaomin Lou, Chongjian Wang, Dandan Wei and Juan Wang collected the data; Qingqing Xu analyzed the data and drafted the manuscript; Zhenxing Mao, Cuiping Wu, Pengling Liu and Keliang Fan revised the manuscript. Cuiping Wu had primary responsibility for final content. All authors read and approved the final manuscript.

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References

Bao, Y., Sun, Y., Meng, S., Shi, J., Lu, L., 2020. 2019-nCoV epidemic: address mental health care to empower society. Lancet 395 e37-e38.
Batelaan, N.M., Seldenrijk, A., Bot, M., van Balkom, A.J., Penninx, B.W., 2016. Anxiety and new onset of cardiovascular disease: critical review and meta-analysis. Br. J. Psychiatry 208, 223–231.
Baxter, A.J., Scott, K.M., Vos, T., Whiteford, H.A., 2013. Global prevalence of anxiety disorders: a systematic review and meta-regression. Psychol. Med. 43, 897–910.
Baxter, A.J., Vos, T., Scott, K.M., Ferrari, A.J., Whiteford, H.A., 2014. The global burden of anxiety disorders in 2010. Psychol. Med. 44, 2363–2374.
Brooks, S.K., Webster, R.K., Smith, L.E., Woodland, L., Wessely, S., Greenberg, N., Rubin, G.J., 2020. The psychological impact of quarantine and how to reduce it: rapid review of the evidence. Lancet 395, 912–920.
Burgard, S.A., Elliott, M.R., Zivin, K., House, J.S., 2013. Working conditions and depressive symptoms: a prospective study of US adults. J. Occup. Environ. Med. 55, 1007–1014.
Dowd, J.B., Albright, J., Raghunathan, T.E., Schoeni, R.F., Leclere, F., Kaplan, G.A., 2011. Deeper and wider: income and mortality in the USA over three decades. Int. J. Epidemiol. 40, 183–188.
Eaton, W.W., Roth, K.B., Bruce, M., Cottler, L., Wu, L., Nestadt, G., Ford, D., Bienvenu, O. J., Crum, R.M., Rebok, G., Anthony, J.C., Muñoz, A., 2013. The relationship of mental and behavioral disorders to all-cause mortality in a 27-year follow-up of 4 epidemiologic catchment area samples. Am. J. Epidemiol. 178, 1366–1377.
Glowinski, A.L., D'Amelio, G., 2016. Depression Is a Deadly Growing Threat to Our Youth: Time to Rally. Pediatrics 138.
González-Sanguino, C., Ausín, B., Castellanos, M.A., Muñoz, M., 2020. Mental health consequences of the Covid-19 outbreak in Spain. A longitudinal study of the alarm situation and return to the new normality. Prog. Neuropsychopharmacol. Biol. Psychiatry, 110219.
Gupta, A.K., Maity, C., 2021. Efficacy and safety of Bacillus coagulans LBSC in irritable bowel syndrome: A prospective, interventional, randomized, double-blind, placebo-controlled clinical study [CONSORT Compliant]. Medicine (Baltimore). 100, e23641.
Ho, C.S., Chee, C.Y., Ho, R.C., 2020. Mental Health Strategies to Combat the Psychological Impact of COVID-19 Beyond Paranoia and Panic. Ann. Acad. Med. Singap. 49, 155–160.
Holmes, E.A., O'Connor, R.C., Perry, V.H., Tracey, I., Wessely, S., Arseneault, L., Ballard, C., Christensen, H., Cohen Silver, R., Everall, I., Ford, T., John, A., Kabir, T., King, K., Madan, I., Michie, S., Przybylski, A.K., Shafran, R., Sweeney, A., Worthman, C.M., Yardley, L., Cowan, K., Cope, C., Hotopf, M., Bullmore, E., 2020. Multidisciplinary research priorities for the COVID-19 pandemic: a call for action for mental health science. Lancet Psychiatry 7, 547–560.
Kessler, R.C., Angermeyer, M., Anthony, J.C., R, D.E.G., Demyttenaere, K., Gasquet, I., G, D.E.G., Gluzman, S., Gureje, O., Haro, J.M., Kawakami, N., Karam, A., Levinson, D., Medina Mora, M.E., Oakley Browne, M.A., Posada-Villa, J., Stein, D.J., Adley Tsang, C.H., Aguilar-Gaxiola, S., Alonso, J., Lee, S., Heeringa, S., Pennell, B.E., Berglund, P., Gruber, M.J., Petukhova, M., Chatterji, S., Ustün, T.B., 2007. Lifetime prevalence and age-of-onset distributions of mental disorders in the World Health Organization's World Mental Health Survey Initiative. World Psychiatry 6, 168–176.
Khadse, P.A., Gowda, G.S., Ganjekar, S., Desai, G., Murthy, P., 2020. Mental Health Impact of COVID-19 on Police Personnel in India. Indian J. Psychol. Med. 42, 580–582.
Li, Q., Miao, Y., Zeng, X., Tarimo, C.S., Wu, C., Wu, J., 2020. Prevalence and factors for anxiety during the coronavirus disease 2019 (COVID-19) epidemic among the teachers in China. J. Affect. Disord. 277, 153–158.
Löwe, B., Decker, O., Müller, S., Brähler, E., Schellberg, D., Herzog, W., Herzberg, P.Y., 2008. Validation and standardization of the Generalized Anxiety Disorder Screener (GAD-7) in the general population. Med. Care 46, 266–274.
Lu, H., Stratton, C.W., Tang, Y.W., 2020. Outbreak of pneumonia of unknown etiology in Wuhan, China: The mystery and the miracle. J. Med. Virol. 92, 401–402.
Ma, Z., Zhao, J., Li, Y., Chen, D., Wang, T., Zhang, Z., Chen, Z., Yu, Q., Jiang, J., Fan, F., Liu, X., 2020. Mental health problems and correlates among 746 217 college students during the coronavirus disease 2019 outbreak in China. Epidemiol. Psychiatr. Sci. 29 e181.
Mattila, E., Peltokoski, J., Neva, M.H., Kaunonen, M., Helminen, M., Parkkila, A.K., 2021. COVID-19: anxiety among hospital staff and associated factors. Ann. Med. 53, 237–246.
Membride, H., 2016. Mental health: early intervention and prevention in children and young people. Br. J. Nurs. 25, 556–557, 552-554.
Miloyan, B., Bulley, A., Bandeen-Roche, K., Eaton, W.W., Gonçalves-Bradley, D.C., 2016. Anxiety disorders and all-cause mortality: systematic review and meta-analysis. Soc. Psychiatry Psychiatr. Epidemiol. 51, 1467–1475.
Morris, J.K., Cook, D.G., Shaper, A.G., 1994. Loss of employment and mortality. BMJ 308, 1135–1139.
Mykletun, A., Bjerkeset, O., Overland, S., Prince, M., Dewey, M., Stewart, R., 2009. Levels of anxiety and depression as predictors of mortality: the HUNT study. Br. J. Psychiatry 195, 118–125.
Nearchou, F., Flinn, C., Niland, R., Subramaniam, S.S., Hennessy, E., 2020. Exploring the Impact of COVID-19 on Mental Health Outcomes in Children and Adolescents: A Systematic Review. Int. J. Environ. Res. Public Health 17.
Neil, A.L., Christensen, H., 2009. Efficacy and effectiveness of school-based prevention and early intervention programs for anxiety. Clin. Psychol. Rev. 29, 208–215.
Pan, K.Y., Kok, A.A.L., Eikelenboom, M., Horsfall, M., Jörg, F., Luteijn, R.A., Rhebergen, D., Oppen, P.V., Giltay, E.J., Penninx, B., 2020. The mental health impact of the COVID-19 pandemic on people with and without depressive, anxiety, or obsessive-compulsive disorders: a longitudinal study of three Dutch case-control cohorts. Lancet Psychiatry.
Santabárbara, J., Lasheras, I., Lipnicki, D.M., Bueno-Notivol, J., Moreno, M.P., López-Antón, R., De la Cámara, C., Lobo, A., Gracia-García, P., 2020. Prevalence of anxiety in the COVID-19 pandemic: An updated meta-analysis of community-based studies. Prog. Neuropsychopharmacol. Biol. Psychiatry, 110207.
Spitzer, R.L., Kroenke, K., Williams, J.B., Löwe, B., 2006. A brief measure for assessing generalized anxiety disorder: the GAD-7. Arch. Intern. Med. 166, 1092–1097.
Stepowicz, A., Wencka, B., Bieńkiewicz, J., Horzelski, W., Grzesiak, M., 2020. Stress and Anxiety Levels in Pregnant and Post-Partum Women during the COVID-19 Pandemic. Int. J. Environ. Res. Public Health 17.
Wang, C., Horby, P.W., Hayden, F.G., Gao, G.F., 2020a. A novel coronavirus outbreak of global health concern. Lancet 395, 470–473.
Wang, C., Pan, R., Wan, X., Tan, Y., Xu, L., Ho, C.S., Ho, R.C., 2020b. Immediate Psychological Responses and Associated Factors during the Initial Stage of the 2019 Coronavirus Disease (COVID-19) Epidemic among the General Population in China. Int. J. Environ. Res. Public Health 17.
Wang, Y.H., Li, J.Q., Shi, J.F., Que, J.Y., Liu, J.J., Lappin, J.M., Leung, J., Ravindran, A. V., Chen, W.Q., Qiao, Y.L., Shi, J., Lu, L., Bao, Y.P., 2020c. Depression and anxiety in relation to cancer incidence and mortality: a systematic review and meta-analysis of cohort studies. Mol. Psychiatry 25, 1487–1499.
Whiteford, H.A., Degenhardt, L., Rehm, J., Baxter, A.J., Ferrari, A.J., Erskine, H.E., Charlson, F.J., Norman, R.E., Flaxman, A.D., Johns, N., Burstein, R., Murray, C.J., Vos, T., 2010. Global burden of disease attributable to mental and substance use disorders: findings from the Global Burden of Disease Study. Lancet 382, 1575–1586.
Wittchen, H.U., Jacobi, F., Rehm, J., Gustavsson, A., Svensson, M., Jönsson, B., Olesen, J., Allgulander, C., Alonso, J., Faravelli, C., Fratiglioni, L., Jennum, P., Lieb, R., Maercker, A., van Os, J., Preisig, M., Salvador-Carulla, L., Simon, R., Steinhausen, H.C., 2010. The size and burden of mental disorders and other disorders of the brain in Europe. Eur. Neuropsychopharmacol. 21, 655–679.

Artikel 5

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EMPIRICAL RESEARCH

Risk and Protective Factors for Prospective Changes in Adolescent Mental Health during the COVID-19 Pandemic

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Abstract
The restrictions put in place to contain the COVID-19 virus have led to widespread social isolation, impacting mental health worldwide. These restrictions may be particularly difficult for adolescents, who rely heavily on their peer connections for emotional support. However, there has been no longitudinal research examining the psychological impact of the COVID-19 pandemic among adolescents. This study addresses this gap by investigating the impact of the COVID-19 pandemic on adolescents' mental health, and moderators of change, as well as assessing the factors perceived as causing the most distress. Two hundred and forty eight adolescents ($M_{age} = 14.4$; 51% girls; 81.8% Caucasian) were surveyed over two time points; in the 12 months leading up to the COVID-19 outbreak (T1), and again two months following the implementation of government restrictions and online learning (T2). Online surveys assessed depressive symptoms, anxiety, and life satisfaction at T1 and T2, and participants' schooling, peer and family relationships, social connection, media exposure, COVID-19 related stress, and adherence to government stay-at-home directives at T2 only. In line with predictions, adolescents experienced significant increases in depressive symptoms and anxiety, and a significant decrease in life satisfaction from T1 to T2, which was particularly pronounced among girls. Moderation analyses revealed that COVID-19 related worries, online learning difficulties, and increased conflict with parents predicted increases in mental health problems from T1 to T2, whereas adherence to stay-at-home orders and feeling socially connected during the COVID-19 lockdown protected against poor mental health. This study provides initial longitudinal evidence for the decline of adolescent's mental health during the COVID-19 pandemic. The results suggest that adolescents are more concerned about the government restrictions designed to contain the spread of the virus, than the virus itself, and that those concerns are associated with increased anxiety and depressive symptoms, and decreased life satisfaction.

Keywords Adolescence · COVID-19 · Depressive symptoms · Anxiety · Life satisfaction · Longitudinal

Introduction

The COVID-19 pandemic has swept through the globe quickly and indiscriminately. Government restrictions put in place to slow the spread of the virus have led to widespread social isolation, which can have profound consequences for mental health (Brooks et al. 2020). While these restrictions have been challenging for people of all ages, they may be particularly difficult for adolescents, who at this developmental stage rely heavily on their peer connections for emotional support and social development (Ellis and Zarbatany 2017). As orders to stay at home and socially distance from others impedes most peer interaction, it is important to examine the impact that this is having on adolescents' mental health, especially given the strong associations between interpersonal stress and the onset of emotional difficulties among adolescents (Rapee et al. 2019). However, to date there is no longitudinal research examining the psychological impact of the COVID-19 pandemic among adolescents, and what is known is limited by retrospective reports of perceived mental health changes (e.g., Hawke et al. 2020). The current study addressed this gap by examining changes in adolescent mental health

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within a longitudinal framework that included baseline measures of adolescents' mental health before the COVID-19 pandemic, and a second measure two months following the implementation of government restrictions and online learning.

Increased Vulnerability during Adolescence

To appreciate the importance of examining the effects of the COVID-19 pandemic on adolescent mental health, one must first understand the pertinent developmental changes that occur during adolescence that may make this a particularly distressing time. Adolescence has often been labeled by developmental theorists as a period of storm and stress (Casey et al. 2010). This is due in part, to the physical and chemical changes occurring in the brain from early adolescence, which result in a 'neural mismatch' whereby emotionality is heightened in response to real and/or perceived stressors (Bailen et al. 2019), yet the self-regulatory system required to manage these emotions remains largely underdeveloped until early adulthood (Somerville et al. 2010). Another defining characteristic of adolescence is the marked increase in social sensitivity and the importance of peers (Somerville 2013). As adolescents strive for independence from their parents, the time spent with peers increases dramatically, and for the first time, friends rather than parents become the primary source of interaction and influence (Meuwese et al. 2017). However, the increased social sensitivity that emerges during adolescence also means that peer relationships can be a major source of conflict, rejection, and interpersonal stress (Somerville 2013). During adolescence, acceptance and rejection by peers is used to guide behaviors, shape self-concept and gauge self-worth (Connell and Wellborn 1991). Thus, negative peer interactions during this important developmental window can lead to poor self-concept, a low sense of worth, and subsequent increases in symptoms of anxiety and depression, whereas positive peer relationships can provide social and emotional support, which are known to protect against the risk of both depression and anxiety (La Greca and Harrison 2005).

The increases in interpersonal stress, coupled with heightened emotional reactivity and low emotion-regulation, can place adolescents at a greater risk of developing many common forms of psychopathology including generalized anxiety, eating disorders, depression, and social anxiety (Rapee et al. 2019). In fact, this particular subset of internalizing disorders has previously been referred to as "disorders of adolescence" due to their typical median onset age of 13 to 19 years (Rapee et al. 2019). Collectively, the developmental characteristics of adolescence, the typical age of onset for these social emotional disorders, and the fact that adolescents have been conducting their schooling online, spending most of their time indoors and are physically separated from their peers, means they may be at an increased risk of developing psychological problems during the COVID-19 global pandemic.

Previous COVID-19 Studies

Whilst it may take years, and many studies, to fully understand the sequelae of the COVID-19 pandemic, prior research shows a consistent link between the pandemic and mental health. Importantly, existing research highlights a number of COVID-19 related factors (e.g., government restrictions, media exposure, etc.) that may influence these associations. As the current study explores these factors in conjunction with prospective changes in mental health, the existing research is reviewed here briefly to demonstrate the association between COVID-19 and mental health, and to highlight any relevant influencing factors.

Previous studies with adults consistently point to the detrimental impact of COVID-19 on the mental health of individuals. For example, research conducted among 1210 respondents during the early stages of the crisis in China found that more than half (53.8%) rated the negative impact of the COVID-19 pandemic on their psychological health as moderate to severe (Wang et al. 2020). A second study in China reported COVID-19 related increases in generalized anxiety, which were found to be more pronounced in younger people (<35 years) compared to older age groups (Huang and Zhao 2020). A meta-analysis of 13 studies of mental health among healthcare workers found that almost a quarter exhibited elevated COVID-19 related symptoms of anxiety (23.2%) and depression (22.8%), and more than a third (38.9%) experienced problems with insomnia (Pappa et al. 2020).

To date, few studies have evaluated the impact of the pandemic on mental health in adolescents. One study surveyed 1738 Chinese participants at two time points following the commencement of the pandemic and found no significant changes across time in depression, anxiety and stress over the study period (Wang et al. 2020). However, there was some indication that younger people (aged 12–21 years) perceived the impact of COVID-19 to be greater than older adults (aged 50–59 years). Beliefs about the ease of virus transmission and increased media exposure to health information about COVID-19 were significantly associated with depression and/or anxiety at both time points. In contrast, taking precautionary measures to avoid transmission (e.g., regular handwashing), complying with the stay-at-home orders, and low perceived likelihood of contracting and dying from COVID-19 were all found to be protective.

In a study focused on youth, retrospective reports of mental health symptoms three months prior to the pandemic were compared to those three weeks into the pandemic

among 622 Canadian adolescents and young adults (Hawke et al. 2020). Participants perceived reductions in their mental health across the period, particularly in depression/low mood and anxiety. Another study also found high levels of depression and anxiety in Chinese adolescents during the peak of the pandemic, although lower levels were reported among males and youth that regularly engaged in exercise (Chen et al. 2020). Finally, a survey of 1054 Canadian adolescents ($M_{age} = 16.68$) found that adolescents were most concerned about the impact on their schooling, followed by general concerns about the COVID-19 crisis, and not feeling connected to friends (Ellis et al. 2020). Further, COVID-19 related concerns, spending less time on schoolwork and more time with friends was positively associated with depression, whereas spending more time with family was negatively associated. COVID-19 related concerns were also positively associated with loneliness, while spending more time with family and friends, and engaging in more physical activity, was negatively associated. Social media use moderated the association between COVID-19 concerns and depression, with those reporting high levels of social media use also reporting the most depression.

Potential Risk and Protective Moderating Factors

The cross-sectional research cited above points to a number of factors that may be important for examining the association between adolescent mental health and COVID-19 longitudinally. Namely age, gender, media exposure, family conflict, changes to schooling, adherence to restrictions, and levels of social connection have all been implicated as potential moderators within the existing research. As previous research has demonstrated that adolescents were particularly concerned about feeling socially disconnected from their friends, and that COVID-19 related worries along with less time on schooling were significantly associated with depression cross-sectionally (Ellis et al. 2020), it is possible that social connectedness, COVID-19 related concerns, and disruptions to schooling may predict change from pre-pandemic to intra-pandemic levels of depression, anxiety and life satisfaction. Further, as a prior two-wave study found that increased exposure to media reports about COVID-19 was significantly associated with increases in anxiety and depression, whereas complying with the stay at home rules was protective (Wang et al. 2020), it is important to examine these associations longitudinally. Considering the substantial amount of time adolescents spend on social media, it may also be important to examine the effect of exposure to COVID-19 related media reports via social media, particularly as prior has found that increased social media use during the pandemic was associated with increased adolescent depression and anxiety (Ellis et al. 2020).

Interestingly none of the studies reviewed above investigated whether mental health outcomes during the COVID-19 pandemic differed by sex, which is surprising considering the well-established sex differences in the prevalence and severity of depression and anxiety (Rose and Rudolph 2006). Hence, research examining sex differences in adolescents' responses to COVID-19 and its associated restrictions is needed to address this gap. Finally, as depression and anxiety are known to increase, and life satisfaction to decrease, from early adolescence onward (Goldbeck et al. 2007; Rapee et al. 2019), it is important to ensure that any potential prospective changes in mental health symptoms during COVID-19 are not simply due to age effects. However to date, developmental differences in COVID-19 responses have not been examined in adolescent samples.

The Current Study

Taken together, the above research provides consistent evidence that the COVID-19 crisis may be having a significant impact on the psychological health of adolescents across the globe. However, all of these studies have relied on respondents indicating the perceived impact of COVID-19 on their current mental health. Only longitudinal studies that include a baseline measure before COVID-19 can truly detect changes in mental health related to the pandemic, although there has been no such research to date. To address this gap, the primary purpose of the current research was to determine the effect of the pandemic and the government-imposed restrictions associated with the response to COVID-19 on the emotional health of adolescents. The first aim was to identify which factors were viewed by adolescents as producing the greatest COVID-19 related distress. It was hypothesized that not being able to see and spend time with friends, and concerns about moving to online learning, would cause adolescents the most distress. The second aim was to prospectively investigate the impact of the COVID-19 pandemic on changes in adolescent anxiety, depressive symptoms, and life satisfaction. It was anticipated that from T1 (pre-pandemic) to T2 (during the pandemic) adolescents would report an increase in symptoms of anxiety and depression, and a decrease in overall life satisfaction. The third aim was to ascertain which factors during the pandemic served to decrease or increase the risk of experiencing adjustment difficulties two months after the pandemic began and whether there were any age or sex differences evident. It was predicted that disruptions to schooling, COVID-19 related distress, family conflict, and frequent media exposure during the pandemic, would serve to increase the risk of mental health problems, whereas feeling socially connected and adhering to COVID-19 related restrictions during the lockdown would decrease the risk of mental health problems two months into the

pandemic. As depression and anxiety are more prevalent in girls than in boys, it was expected that any changes in mental health symptoms from T1 to T2 would be stronger in girls compared to boys, and if the predicted increases in mental health problems from T1 to T2 are simply due to developmental maturation, it was expected older adolescents would report greater increases in symptoms of depression and anxiety, and greater decreases in life satisfaction, than younger adolescents.

Methods

Participants

Participants in the current study were part of the larger longitudinal Risks to Adolescent Wellbeing Project (the RAW Project) who have been completing online questionnaires annually for the past four years. Participants in the study resided in an urban area of New South Wales (NSW) Australia, and the majority of participating families in the RAW Project are Caucasian (81.8%), speak English as a first language (96.4%), and have previously reported a middle to high socioeconomic status (79.2%). Of the 467 adolescents invited to participate in the COVID-19 survey, 248 (53%) returned completed responses and thus comprised the current sample. At the time the COVID-19 survey was completed, the adolescents were aged 13 to 16 years ($M_{age} = 14.4$, $SD = 0.5$), with almost equal numbers of boys ($n = 122$) and girls ($n = 126$) participating.

Measures

Generalized anxiety

The Generalized Anxiety subscale (e.g., "I worry about things") of the Spence Children's Anxiety Scale (SCAS-C; Spence 1998) was used to measure self-reported symptoms of anxiety. Adolescents were required to indicate how often they experienced each symptom on a 4-point Likert scale ranging from 0 (never) to 3 (always). The total scores for the Generalized Anxiety subscale ranged from 0 to 18 with higher scores indicating greater anxiety. The Cronbach's alphas in the current study were acceptable ($\alpha = 0.86$ at T1 and 0.87 at T2).

Depressive symptoms

The Short Mood and Feelings Questionnaire—Child Version (SMFQ-C; Angold et al. 1995) is a 13-item self-report measure used to assess symptoms of depression in children and adolescents. Participants were required to indicate how true each statement was for them over the past 2 weeks on a 3-point Likert scale ranging from 0 (not true) to 2 (always true). Total scores ranged from 0 to 26 with higher scores indicating more depressive symptoms. The reliability of the measure was good in the current sample ($\alpha = 0.91$ at T1 and 0.93 at T2).

Life satisfaction

The Student's Life Satisfaction Scale (SLSS; Huebner 1994) is a 9-item self-report measure of global life satisfaction for young people. Adolescent participants were required to indicate their level of agreement with a statement (e.g., "My life is going well") on a 7-point Likert scale ranging from 1 (strongly disagree) to 7 (strongly agree). After reverse coding the two negatively worded items, item scores were averaged to provide a mean score ranging from 1 to 7, with higher scores indicating greater life satisfaction. The Cronbach's alphas in the current study were high ($\alpha = 0.91$ at T1 and 0.92 at T2).

COVID-19 related distress

This 18-item measure assessing COVID-19 related distress was specifically developed for the current research (items listed in Fig. 1). Adolescents were required to indicate how distressed they were about each item listed on a 10-point scale ranging from 1 (not at all distressed) to 10 (extremely distressed). Item scores were averaged to provide a mean score ranging from 1 to 10 with higher scores indicating greater COVID-19 related distress. The Cronbach's alpha for the new scale was 0.91.

Disruption to schooling

To understand the impact of COVID-19 on schooling four items were developed to assess: format of school attendance, difficulties during online learning, motivation to complete school work, and impact on education. Specifically, adolescents were asked if they were (a) attending school in-person; (b) learning online only; or (c) participating in a mix of in-person and online schooling. For those learning online, an additional yes or no question was asked: "Have you had any difficulties switching to online learning?", and if yes, an open-ended question followed asking for details of their difficulties. The self-perceived impact of online learning and COVID-19 on education was measured using two questions, "Do you think your education is suffering due to online schooling?" and "Do you think your education is suffering due to the disruptions from COVID-19?", rated on a 4-point scale from 1 (not at all) to 4 (a great deal). The two questions were highly correlated ($r = 0.758$, $p < 0.001$) so a mean of the two scores was calculated with higher scores indicating a larger impact on schooling. A single-item question was used to measure the change in students' motivation to complete school work (i.e.,

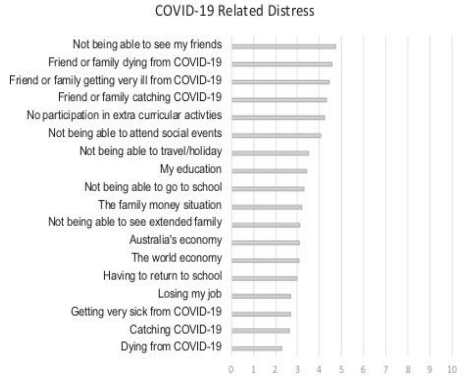

Fig. 1 Factors contributing to COVID-19 related distress among adolescents. Rated on a scale of 0 (not at all distressed) to 10 (extremely distressed)

"Compared to how motivated you usually are to do school work, how motivated do you feel now to do your school work?") rated on a 3-point scale (1 = much less motivated, 2 = about the same, 3 = much more motivated).

Media exposure

One question assessed their exposure to traditional news media (i.e., "On average, how often to you read/watch media reports about COVID-19 each day?") and a second question assessed social media related exposure (i.e., "On average, how often do you read posts about COVID-19 on social media each day?"). Both items were rated on a 6-point scale from 1 (not at all) to 6 (five times or more).

Interpersonal conflict

The current study developed four self-report item to assess change in interpersonal conflict between adolescents and their mothers, fathers, siblings, and friends due to the COVID-19 social distancing rules and stay at home restrictions (e.g., "Do you feel you are having more or fewer disagreements/arguments with your father?"). Adolescents responded on a 5-point Likert scale ranging from 1 (we have argued much less) to 5 (we have argued much more), thus higher scores indicated greater interpersonal conflict.

Social connectedness

The Social Connectedness Scale (SCS; Lee and Robbins 1995) is a measure of how emotionally distant or connected a respondent feels with those close to them, and society more broadly. Adolescents were required to indicate their level of agreement with eight statements (e.g., "I feel distant from people") on a 6-point scale, ranging from 1 (strongly disagree) to 6 (strongly agree). Item scores were averaged to provide a mean score ranging from 1 to 6, with higher scores indicating greater social connectedness. The Cronbach's alpha value in the current study was high ($\alpha = 0.91$).

Adherence to COVID-19 Australian government stay-at-home directive

At the time T2 data was collected, laws in Australia were in place to help minimize the spread of COVID-19. Residents of the state New South Wales were asked to stay at home unless they were going to work or school, obtaining food or other essential goods and services, exercising, or seeking medical care. To assess adherence to this stay-at-home directive, adolescents were asked how often they had left their home for reasons other than those listed above, responding on a 5-point scale from 0 (I have only left my home for the reasons listed above) to 4 (more than 10 times).

Procedure

The parents of all adolescents currently enrolled in the RAW Project were sent information about the COVID-19 study and a link to the T2 online survey. Parents who consented to their child participating, then shared the link with their child who assented online prior to beginning the survey. Participants were asked to complete the survey within two weeks of receiving the initial email, after which the survey was closed. The World Health Organization declared COVID-19 a pandemic on March 11, 2020. The T1 data used for the current study was collected online throughout 2019 as part of the larger RAW Project (thus prior to the COVID-19 pandemic), and the T2 data was collected between May 5th and May 14th 2020, approximately two months after the Australian government had imposed the stay-at-home orders and schools had moved to online learning.

Data Analysis

Distribution and descriptive statistics were obtained through SPSS (v26; IBM Corp. 2019). To determine whether levels of depressive symptoms, anxiety, and life satisfaction significantly increased or decreased in the period before the pandemic began and two months into the pandemic, a paired samples *t*-test in SPSS was conducted. Potential moderators of the change in mental health scores before and during COVID-19 were examined in SPSS using Model 2 in the MEMORE macro (Montoya and Hayes 2017), which is specifically designed to assess moderation in two instance repeated measures research designs (Montoya 2019). This procedure computes a pre-post difference score and then determines whether the moderator of interest predicts that difference (Judd et al. 2001; Kenny 2018). For all non-dichotomous moderators, significant interactions

Table 1 Means and standard deviations for key study variables for male, female, and total sample

	Males		Females		Total sample			
	Mean	SD	Mean	SD	Mean	SD	Skew	Kurtosis
Generalized anxiety T1	3.63	3.13	5.55	4.05	4.60	3.74	1.13	1.12
Generalized anxiety T2	3.64	3.16	6.52	4.31	5.10	4.05	0.72	−0.01
Depressive symptoms T1	2.81	3.18	4.77	5.00	3.81	4.31	1.57	2.21
Depressive symptoms T2	4.02	4.76	8.16	6.46	6.12	6.04	1.09	0.41
Life satisfaction T1	5.65	0.87	5.50	1.09	5.57	0.99	−0.81	0.29
Life satisfaction T2	5.23	1.10	4.81	1.14	5.01	1.14	−0.52	−0.25
COVID-19 distress T2	3.22	1.48	3.70	1.47	3.46	1.49	0.50	−0.27
Impact on education T2	2.10	0.79	2.10	0.74	2.10	0.76	0.90	0.72
Motivation to study T2	1.66	0.68	1.57	0.67	1.62	0.68	0.64	−0.67
Traditional media exposure T2	2.10	1.16	1.85	0.90	1.97	1.04	1.72	3.76
Social media exposure T2	2.26	1.48	2.25	1.38	2.26	1.42	1.32	1.10
Conflict—mother T2	3.05	0.97	2.86	1.08	2.95	1.03	−0.14	−0.07
Conflict—father T2	3.13	0.95	2.95	1.09	3.04	1.03	−0.28	−0.03
Conflict—siblings T2	3.43	0.99	3.40	1.11	3.41	1.05	−0.48	−0.13
Conflict—friends T2	2.31	0.94	2.30	1.07	2.30	1.00	−0.01	−1.10
Social disconnection T2	2.56	1.08	3.26	1.38	2.92	1.29	0.57	−0.18
Stay at home adherence T2	1.52	0.76	1.44	0.64	1.48	0.70	1.40	1.54

were probed at 1 SD above and below the mean. Data coverage for T1 and T2 mental health variables was 99.6% to 100%, respectively. All other variables contained less than 1% missing data with the exception of the family conflict variables which had a "not applicable option" for family members not living within the same household. This resulted in non-responses of 3.2% for mother, 9.7% for father, and 7.7% for siblings. Due to the small percentage of missing data, all analyses were conducted using pairwise deletion.

Results

Preliminary Results

Descriptive statistics (for total sample, and boys and girls separately) and correlations between key variables are displayed in Tables 1 and 2. As shown in Table 1, most variables were normally distributed with no obvious skewedness (−0.81 to 1.72), although the kurtosis of values of depressive symptoms at T1 (2.21) and exposure to traditional media at T2 (3.76) fell slightly above the recommended values of plus or minus two (Gravetter et al. 2020). As expected, on average girls reported more symptoms of depression and anxiety at both time points, whereas boys reported more familial conflict during the lockdown period. Boys and girls were more similar on average levels of life satisfaction, exposure to COVID-19 related media, and attitudes toward the impact of COVID-19 on their schooling. The correlations in Table 2 show that all mental health variables were significantly correlated within and between time points in the predicted direction. COVID-19 related distress and feeling socially disconnected from others were most strongly related to all mental health symptoms, as well as being significantly associated with viewing posts about COVID-19 on social media, less motivation to study, a greater perceived negative impact on schooling, and greater conflict with siblings.

Adolescents Distress during COVID-19

Addressing the first aim concerning what is causing adolescents the most distress, Fig. 1 shows that adolescents reported low to moderate levels of COVID-19 related stress across the 18 items assessed. As predicted, the most distressing issue for adolescents during this time was not being able to see their friends, closely followed by a friend or family member contracting and getting very sick and/or dying from COVID-19. Also high on adolescents' lists of concerns was the inability to participate in their normal extra-curricular activities (e.g., sports, dance, music lessons etc.) or attend social events. In contrast, they reported very little concern about contracting, getting ill or dying from COVID-19 themselves.

Overall Changes in Mental Health

To address the second aim relating to changes in mental health prior to and during the pandemic, the results of the paired samples *t*-tests showed significant increases in

Table 2 Bivariate correlations between key study variables

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
1. Generalized Anx T1	1																
2. Generalized Anx T2	0.61***	1															
3. Depressive symptoms T1	0.54***	0.35***	1														
4. Depressive symptoms T2	0.41***	0.67***	0.41***	1													
5. Life satisfaction T1	−0.43***	−0.30***	−0.56***	−0.49***	1												
6. Life satisfaction T2	−0.34***	−0.45***	−0.33***	−0.67***	0.64***	1											
7. COVID-19 distress T2	0.35***	0.43***	0.26***	0.36***	−0.23***	−0.32***	1										
8. Motivation to study	−0.07	−0.04	−0.06	−0.16*	0.17**	0.19**	−0.17**	1									
9. Impact on education T2	0.21**	0.21**	0.23***	0.28***	−0.19**	−0.20**	0.32***	−0.46***	1								
10. Trad media exposure T2	0.08	−0.04	0.09	−0.05	−0.01	0.01	0.17**	0.10	−0.01	1							
11. Social media exposure T2	0.17**	0.14*	0.22**	0.19**	−0.18**	−0.13*	0.16*	0.00	0.11	0.44***	1						
12. Conflict—mother T2	0.08	0.03	0.09	0.16*	−0.20**	−0.28***	0.03	−0.10	0.10	0.06	0.08	1					
13. Conflict—father T2	0.01	0.08	0.05	0.21**	−0.08	−0.20**	0.06	−0.13*	0.14*	0.11	0.15*	0.59***	1				
14. Conflict—siblings T2	0.16*	0.13*	0.18**	0.12	−0.11	−0.15*	0.22**	0.03	−0.01	0.09	0.11	0.26***	0.19**	1			
15. Conflict—friends T2	0.01	0.06	0.05	0.05	−0.07	−0.14*	0.01	−0.09	0.00	−0.04	0.03	0.19**	0.17*	0.06	1		
16. Disconnectedness T2	0.33***	0.47***	0.35***	0.62***	−0.39***	−0.49***	0.34***	−0.19**	0.19**	0.01	0.23***	0.15*	0.17*	0.17*	0.06	1	
17. Stay home adherence T2	−0.07	−0.04	0.00	0.01	0.01	−0.11	−0.03	−0.04	0.15*	0.04	0.04	−0.01	−0.02	0.06	0.07	−0.10	1

T1 time 1, *T2* time 2, *Anx* anxiety, *Trad* traditional, *Stay at home adherence* adherence to government stay at home directives

*$p < 0.05$; **$p < 0.01$; ***$p < 0.001$

Table 3 Results of the moderation analysis: test of factors that moderate changes in mental health from T1 to T2

Moderator	Depression					Anxiety					Life satisfaction				
	F	R^2	*b*	*t (df)*	*p*	*F*	R^2	*b*	*t (df)*	*p*	*F*	R^2	*b*	*t (df)*	*p*
Sex	9.00	0.035	2.18	6.64 (246)	**0.003**	4.19	0.017	2.18	1.81 (246)	**0.041**	5.16	0.021	−0.26	−2.27 (245)	**0.024**
Age	0.89	0.000	−0.17	−0.30 (246)	0.766	1.72	0.007	−0.45	−1.31 (246)	0.191	0.80	0.003	0.08	0.89 (245)	0.372
COVID-19 distress	9.00	0.031	3.34	6.47 (246)	**<0.001**	4.18	0.017	0.30	2.05 (246)	**0.042**	5.56	0.022	−0.09	2.36 (245)	**0.019**
Learning online	0.01	0.000	0.11	0.11 (246)	0.914	0.23	0.001	0.29	0.48 (246)	0.631	1.89	0.008	0.22	1.38 (245)	0.170
Difficulties online	4.53	0.018	3.48	5.26 (244)	**<0.001**	2.47	0.010	0.75	1.57 (244)	0.118	0.16	0.001	−0.05	−0.41 (243)	0.685
Educational impact	3.85	0.016	0.96	1.96 (244)	0.051	0.06	0.000	0.07	0.25 (244)	0.908	0.49	0.001	−0.05	−0.70 (243)	0.485
Motivation to study	3.76	0.015	−1.06	−1.94 (246)	0.053	0.25	0.001	0.16	0.50 (246)	0.615	0.81	0.003	0.08	0.90 (245)	0.370
Traditional media	3.42	0.014	−0.65	−1.85 (246)	0.066	4.51	0.018	−0.05	−2.12 (246)	**0.035**	0.11	0.000	0.02	0.33 (245)	0.740
Social media	0.34	0.001	0.15	0.58 (246)	0.562	0.03	0.000	−0.03	−0.18 (246)	0.857	0.18	0.001	0.02	0.43 (245)	0.671
Conflict—father	7.46	0.033	1.01	2.73 (222)	**0.007**	1.24	0.006	0.26	1.11 (222)	0.267	5.38	0.024	−0.14	−2.32 (221)	**0.021**
Conflict—mother	2.49	0.010	0.58	1.59 (238)	0.116	0.58	0.002	−0.17	−0.76 (238)	0.447	4.07	0.017	−0.12	−2.02 (237)	**0.045**
Conflict—sibling	0.04	0.000	−0.07	−0.21 (227)	0.838	0.11	0.000	−0.07	0.75 (227)	0.747	0.88	0.004	−0.06	−0.94 (226)	0.348
Conflict—friend	0.08	0.000	0.11	0.29 (210)	0.774	0.88	0.004	0.23	0.94 (210)	0.349	1.69	0.008	−0.09	−1.30 (209)	0.195
Social disconnection	42.06	0.146	−0.95	5.41 (245)	**<0.001**	10.27	0.040	−0.54	−3.20 (246)	**<0.001**	9.31	0.037	0.14	3.05 (245)	**0.003**
Stay home adherence	0.01	0.000	0.04	0.08 (246)	0.935	0.25	0.001	0.16	0.50 (246)	0.620	5.08	0.020	−0.19	−2.25 (245)	**0.025**

Significant *p* values are bolded to aid interpretation

adolescents' symptoms of depression, ($t(1, 247) = 6.26$, $p < 0.001$, $d = 0.15$), and anxiety, ($t(1, 244) = 5.26$, $p < 0.001$, $d = 0.40$), and a significant decrease in life satisfaction, ($t(1, 244) = -5.26$, $p < 0.001$, $d = 0.61$) from T1 (before the pandemic) to T2 (2 months into the pandemic).

Potential Moderating Factors

To address the third aim of the research, the results for each of the potential moderating factors examined are presented below. To aid interpretation, the statistical results of all moderating analyses are summarized in Table 3 and described in text below.

Sex

Sex of the youth significantly moderated the change scores in depressive symptoms, with results indicating that although there were significant increases in depressive symptoms from T1 to T2 for both boys and girls, this effect was more pronounced in girls. This result was replicated for changes in anxiety, with girls again showing the largest increases in symptoms from T1 to T2. Finally, sex significantly moderated the change in life satisfaction from T1 to T2 with girls showing the greatest decrease.

Age

Age did not moderate change in depressive symptoms, anxiety, or life satisfaction from T1 to T2.

COVID-19 related distress

Levels of distress associated with the COVID-19 pandemic significantly moderated change scores in depressive symptoms, anxiety, and life satisfaction from T1 to T2. Specifically, adolescents with high and moderate levels of COVID-19 related distress experienced significantly greater increases in anxiety and depressive symptoms, and significantly greater decreases in life satisfaction, over time than those with low levels of COVID-19 related distress.

Disruption to schooling

The most commonly reported problems when learning online were related to technology problems, not understanding the learning materials, being unable to ask the teacher to explain the work, and problems with motivation. Results showed that switching to learning exclusively online had no significant effect on levels of depressive symptoms, anxiety, or life satisfaction. However, experiencing the abovementioned difficulties with online learning did significantly moderate change in depressive symptoms,

with those who experienced problems reporting significantly more depressive symptoms during COVID-19, compared to those who experienced no problems with online learning. Online learning difficulties did not moderate changes in anxiety or life satisfaction from T1 to T2. Participants' perceptions that their education was suffering during the COVID-19 lockdown had no significant effect on change scores in depressive symptoms, anxiety or life satisfaction. Finally, differences in motivation to engage in school work before and during the COVID-19 pandemic had no significant effect on changes in depressive symptoms, anxiety or life satisfaction.

Media exposure

Frequency of exposure to traditional media reports (i.e., television, newspaper) about COVID-19 had no significant effect on change in depressive symptoms, but there was a significant moderating effect on changes in anxiety. Results showed those reporting high levels of traditional media exposure had significantly greater decreases in anxiety from T1 to T2 than those reporting low exposure. Frequency of exposure to COVID-19 traditional media reports had no significant effect on changes in life satisfaction. The frequency of reading posts about COVID-19 on social media had no significant effect on changes in depressive symptoms, anxiety or life satisfaction.

Interpersonal conflict

Increased conflict with siblings, friends and mothers had no significant interaction effect on depressive symptoms, however, increased conflict with fathers during COVID-19 significantly moderated change in depressive symptoms from T1 to T2. Those experiencing an increase in conflict with their fathers reported more depressive symptoms at T2 than those that did not. Levels of interpersonal conflict with siblings, friends, mothers or fathers did not moderate change scores in anxiety. Interpersonal conflict with both mothers and fathers significantly moderated changes in life satisfaction with those reporting greater conflict with their mother and father also reporting larger declines in life satisfaction than those with low parental conflict. Interpersonal conflict with siblings and friends had no effect on changes in life satisfaction.

Social connectedness

Feeling socially connected during the COVID-19 lockdown period significantly moderated changes in depressive symptoms, anxiety and life satisfaction. Those perceiving high levels of social connection during COVID-19 reported significantly fewer depressive symptoms and anxiety, and significantly more life satisfaction from T1 to T2 than those feeling socially disconnected during the lockdown period.

Adherence to COVID-19 government restrictions

Adherence to the government's stay at home directive had no significant effect on changes in depressive symptoms or anxiety, however, those reporting greater adherence to the stay at home rules reported lower declines in life satisfaction from T1 to T2 compared to those who continued to leave their homes more frequently.

Discussion

The COVID-19 pandemic has had a significant impact on the lives of millions around the world. Government measures put in place to contain the virus have physically and socially isolated adolescents from their friends, extended family, and other social support networks, leaving many feeling socially isolated, and consequently, at an increased risk of psychological disorder. However, to date, there has been no longitudinal research examining how the pandemic has impacted adolescents' mental health despite decades of research demonstrating the potential lifelong risks associated with prolonged interpersonal stress and social isolation during the adolescent years (e.g., Loades et al. 2020). Further, research has not yet examined which demographic and COVID-19 related factors serve to increase or decrease adolescent mental health symptoms over time. The current study addressed these research gaps by conducting a longitudinal investigation into the effect the COVID-19 virus and its associated restrictions are having on adolescents' mental health, as well as identifying some of the critical impacts and life changes associated with the pandemic. Potential moderators of change in mental health symptoms were also investigated including age, sex, disruptions to schooling, COVID-19 related distress, family conflict, media exposure, social connection, and adherence to COVID-19 related restrictions.

Negative Emotionality

As predicted, the results showed that adolescents' mental health had slightly deteriorated compared to pre-pandemic levels and a number of pandemic-related factors were related to those changes. When interpreting the results, it must be kept in mind that, although mental health measures were taken on two occasions, potential moderators were only measured once and therefore, the results are unable to indicate the direction of relationships.

The pre-pandemic to intra-pandemic increase in depressive symptoms and anxiety, and decrease in life satisfaction

found in the current study is generally consistent with previous retrospective and cross-sectional studies in both adult and adolescent samples, which have reported perceived increases in depression, anxiety, and loneliness due to the effects of COVID-19 (Chen et al. 2020; Wang et al. 2020; Ellis et al. 2020). The current study strengthens and builds upon this literature by demonstrating that living with the restrictions and concerns surrounding COVID-19 are related to not only increases in emotional distress but also with decreases in life satisfaction. More importantly, the prospective collection of these data allows stronger conclusions to be drawn, that go beyond the perceived attributions of participants. Interestingly, while significant decrements in adolescent mental health were demonstrated prospectively, the size of these effects were quite modest, with changes ranging from 0.2 to 0.6 standard deviations. Clearly a large proportion of adolescents are coping well with the impact of the pandemic, at least in the early stages, and most are showing minimal negative impact.

Gender and Age Differences

The finding that girls are experiencing greater declines in mental health than boys during the COVID-19 crisis may not only reflect the well-established literature highlighting sex differences in internalizing problems (e.g., Rose and Rudolph 2006), but also that girls are more likely than boys to rely on their social networks for support when dealing with significant life stressors (Tamres et al. 2002). Thus, the move to online schooling and the restrictions placed on social interaction may effectively impede adolescent girls from employing their most commonly used coping strategy. Although this suggestion would need to be formally tested, the current findings suggest that it may be particularly important to encourage adolescent girls to connect with their friendship groups via safe means, so they can continue to access their much-needed social support systems during the COVID-19 crisis. Previous research has also shown that the prevalence of internalizing disorders increases from early to mid-adolescence (Goldbeck et al. 2007). However, the current study did not find any moderating effect of age, suggesting that the observed increase in mental health symptoms from T1 to T2 cannot be simply explained by these developmental differences, and may instead be due to the changing social, educational and economic climate as a result of COVID-19.

Social Connection and Familial Conflict

Consistent with developmental theory stressing the importance of peer relationships and social interaction during adolescence (Meuwese et al. 2017), and previous findings (Ellis et al. 2020), the current results revealed that adolescents' greatest concern during the COVID-19 lockdown was not being able to see their friends. In fact, all items mentioning friends or social connection were rated higher than any of the other COVID-19 related worries. Signifying the possibility of developmental differences, these findings contrast with research in adults, as adults expressed the greatest concern over family members contracting COVID-19 (Wang et al. 2020). The present results also showed that feeling socially disconnected during the pandemic was associated with higher levels of anxiety and depressive symptoms and lower levels of life satisfaction. The importance of feeling socially connected during the pandemic has been demonstrated previously when it was found that adolescents left alone at home all day reported significantly higher levels of depression and anxiety than those who were accompanied by a parent or relative (Chen et al. 2020). As the current results cannot indicate the causal direction, it is equally plausible that emotional distress leads to social disconnection or that social disconnection leads to greater emotional distress. If the latter direction is demonstrated in future research, it might suggest that organizing to have a parent or relative work from home during such stressful times, may help in mitigating the risks for anxiety and depression, as long as it does not result in greater familial conflict.

About a quarter of the adolescents surveyed reported that conflict with their parents had increased during the lockdown period, which was associated with decreases in life satisfaction; and increased conflict with fathers was associated with more depressive symptoms. This increase in parental conflict and decrease in mental health may reflect a developmental discrepancy between adolescents' inherent drive to connect with peers and seek greater autonomy from their parents (Somerville 2013), while at the same time being ordered to stay at home and physically distance from their friends. This possibility is further supported by the finding that although half of the current sample reported an increase in conflict with their siblings, this was not associated with changes to their mental health during the lockdown period.

Educational Concerns

The current results also indicated that adolescents were not overly concerned with the impact that COVID-19 was having on their education, nor was this related to any of the mental health outcomes examined. These findings are inconsistent with previous work which found that one of adolescents' most pressing COVID-19 related worries was the detriment to their education (Ellis et al. 2020). This may be because the earlier research was carried out immediately following the switch to online learning whereas the current study assessed concerns two months after the initial change,

providing students with the opportunity to adapt and settle into their new learning environment. It may also be due to the younger age of the current cohort relative to those in the earlier study, most of whom were in senior school—a time when grades are important in determining acceptance into university and future occupational opportunities. Although, there was no association between mental health problems and moving to online learning, the current study did find that experiencing difficulties during online learning was associated with an increase in depressive symptoms from T1 to T2. The most commonly reported difficulties were related to technology problems, not understanding the learning materials, being unable to ask the teacher questions, and problems with motivation. All of these difficulties could be relatively easily addressed should online learning be continued long-term (e.g., providing a platform to ask teachers questions during the lesson rather than having to wait for an email response), and implementing these changes may mitigate the increased risk for depressive symptoms if the causal direction of this association does go from learning difficulties to depression.

Media Exposure

Contrary to expectations, high exposure to traditional media reports about COVID-19 had a negative relationship with changes in generalized anxiety levels, and no significant effect on changes in life satisfaction or depressive symptoms. Although there is no clear explanation for the contradictory findings between the current and previous studies, some research suggests that associations between media exposure and internalizing distress are nuanced (Wang et al. 2020). A recent study in China found that although greater depression and anxiety were associated with exposure to radio reports around COVID-19, the same effect was not found in relation to television and internet reports (Wang et al. 2020). These findings are broadly consistent with those found in the current study in that social media posts about COVID-19 were not associated with changes in mental health, whereas reading and watching media reports were positively related to good mental health.

While the direction of these associations cannot be determined from the current results, they are consistent with a suggestion that changes in anxiety led to differences in media exposure. Specifically, due to the established links between avoidant coping and anxiety (Richardson et al. in press), it might be logical to interpret that young people who became more anxious during the COVID-19 period avoided exposure to mainstream media reports. On the other hand, it is possible that watching and reading news reports about the virus plays an important role in building young people's confidence in the public health measures implemented to contain the spread of infection, effectively alleviating uncertainty and concern about its impact. As the rate of transmission and positive cases were fairly low in Australia at the time of the survey, it would be interesting to investigate the role of media exposure further by looking at relationships with adolescent mental health in countries experiencing high rates of transmission and infection, and comparing the findings to those in the current study.

The media also communicates important health information, which may serve to give adolescents a sense of control over what they need to do to avoid contracting the virus, which may also reduce anxiety. Indeed, the current study found those who adhered more closely to government stay-at-home orders reported fewer mental health problems than those who frequently defied them. This is consistent with previous research which also found an association between that taking precautionary measures (e.g., staying at home, wearing a mask) to avoid contracting the virus and lower levels of depression and anxiety (Wang et al. 2020). As with all of the current results, the casual relationship may flow in either direction. On the one hand, these results may suggest that disseminating health information and encouraging adherence to government advice through the media may be an effective way of not only reducing the spread of COVID-19, but also in stabilizing levels of generalized anxiety. On the other hand, the results may suggest that young people who become more distressed by the effects of COVID-19, may be at greater risk to break socially-described precautions, and in turn, may jeopardize their and others' health.

Limitations and Future Directions

The current study has a number of strengths and limitations. First, this study overcomes many of the limitations of previous research by employing a longitudinal design to allow determination of change in mental health symptoms before and during the COVID-19 pandemic. However, despite the longitudinal data collection on mental health, it is not possible to attribute any changes specifically to the effects of COVID-19 as there was no comparison condition. Similarly, the time two mental health measures and COVID-19 related factors were assessed concurrently, so while it was possible to ascertain that these factors were associated with increases or decreases in mental health, the direction of those associations cannot be determined. Employing alternative methods such as ecological momentary assessment or daily diaries may help to clarify the temporal ordering between social, educational, and emotional experiences during the pandemic and adolescents' mental health. Further, the data were all self-report and thus are subject to bias that may not align with more objective assessments of mental health and behaviors. To address this limitation, future research could incorporate

parent and teacher reports of adolescents' adjustment during the COVID-19 pandemic. Finally, the sample used in the current study was relatively small and demographically restricted. The sample was predominately of Caucasian ethnicity and included participants within a restricted age range, and perhaps most importantly for a study of the impacts of COVID-19, data were collected within a single country (Australia) and it cannot be ensured that the results are generalizable to adolescents from other countries that differed widely in rates of infection and severity of government-imposed restrictions.

Implications

While keeping these limitations in mind, several speculative implications can be suggested. First, although it is difficult to disentangle whether the changes in mental health found in the current study are the direct result of anxieties around contracting the virus, or the restrictions put in place to contain it, the current results suggest the latter. Adolescents' concerns around catching and becoming ill from the virus were relatively low whereas difficulties adjusting to the new restrictions placed on social activities and schooling as a result of COVID-19 moderated changes in mental health. Therefore, finding new ways to help adolescents adapt and cope with the changes to their social and physical environment is essential. Ensuring that adolescents, particularly girls, maintain their peer relationships seems especially important, and both parents and teachers should encourage social engagement whenever and however possible, within the confines of government and health guidelines.

In addition, since early changes in symptoms of psychopathology may serve as an antecedent for the onset of chronic mental illness, it is important for parents and school staff to monitor young people for elevated emotional distress and to guide them into early intervention and treatment programs where necessary. It is also recommended that parents and teachers create positive and supportive home and learning environments, both of which have previously been shown to lower levels of internalizing distress in adolescents even when isolated physically from peers (Ellis et al. 2020; Manczak et al. 2019).

Finally, and encouragingly, learning exclusively online did not appear to impact adolescents' mental health, whereas difficulties encountered during online learning did. This demonstrates that adolescents can be resilient and adaptive when needed, as long as they are equipped with the necessary tools and support they require. Most of the online learning difficulties reported were modifiable and related to problems concerning technology, the understanding of learning materials, and being unable to ask the teacher for clarification. Implementing regular question and answer sessions throughout each lesson, finding creative ways to engage students during their online classes, and ensuring students have access to adequate technology may help overcome some of these most common problems, and as a consequence, reduce depressive symptoms associated with online learning difficulties.

Conclusion

Due to the recency of the COVID-19 pandemic, there is very limited research on its psychological consequences, and no research examining the prospective impact of the virus, and its related restrictions, on the emotional health of adolescents. Thus, this research contributes to the existing literature by demonstrating longitudinal declines in the mental health of adolescents, especially among girls, when comparing pre-pandemic to intra-pandemic levels. The current study contributes further by identifying which COVID-19 related factors served to increase or decrease the risk of adolescents developing mental health problems during the pandemic. Specifically, COVID-19 related worries, difficulties with online learning, and increased family conflict were associated with greater psychological maladjustment. In contrast, greater exposure to traditional media, adherence to government restrictions, and feeling socially connected with others was associated with less distress. Consistent with theory highlighting the importance of peers during the adolescent period, the results showed that adolescents' greatest concerns during the COVID-19 crisis were around the disruption to their social interactions and activities, whereas concerns around contracting or getting ill from the virus were very low. This suggests that it is the restrictions put in place to reduce the spread of the virus, rather than the virus itself, that is causing adolescents the most distress. As social isolation, interpersonal stress, and mental health problems during adolescence can be a precursor for mental health problems across the lifespan, parents and teachers are encouraged to assist adolescents in finding ways to maintain their social networks, monitor young people for signs of emotional distress, provide positive and supportive home and learning environments, and engage with mental health professionals early. Finally, as research on the mental health impact of COVID-19 is still in its infancy, more longitudinal research is needed to gain a greater understanding of the long term implications of this pandemic on the emotional wellbeing of young people.

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Author's Contributions N.R.M. conceived of the study, prepared the study materials, analyzed the results, and drafted the manuscript;

J.Y.A.F. helped with the development of the study materials, the coordination of the data collection, and assisted with the data analysis; R.M.R. participated in the study design and helped draft the manuscript; C.E.R. helped design the study and draft the manuscript; E.L.O. helped design the study materials, prepare the data, and draft the manuscript; and J.F. helped design the study materials and draft the manuscript. All authors have read and approved the submitted manuscript.

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Data Sharing and Declaration The datasets generated and/or analyzed during the current study are not publicly available but are available from the corresponding author upon reasonable request.

Compliance with Ethical Standards

Conflict of Interest The authors declare that they have no conflict of interest.

Ethical Approval All procedures performed in studies involving human participants were in accordance with the ethical standards of the institutional and/or national research committee and with the 1964 Helsinki declaration and its later amendments or comparable ethical standards.

Informed Consent Informed consent was obtained from all parents of youth participating in the study, and informed assent was obtained from all adolescents.

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References

Angold, A., Costello, E. J., & Messer, S. C. (1995). Development of a short questionnaire for use in epidemiological studies of depression in children and adolescents. *International Journal of Methods in Psychiatric Research*, *5*, 237–249.

Bailen, N. H., Green, L. M., & Thompson, R. J. (2019). Understanding emotion in adolescents: a review of emotional frequency, intensity, instability, and clarity. *Emotion Review*, *11*(1), 63–73.

Brooks, S. K., Webster, R. K., Smith, L. E., Woodland, L., Wessely, S., Greenberg, N., & Rubin, G. J. (2020). The psychological impact of quarantine and how to reduce it: rapid review of the evidence. *The Lancet*, *395*(10227), 912–920. https://doi.org/10.1016/S0140-6736(20)30460-8.

Casey, B. J., Jones, R. M., Levita, L., Libby, V., Pattwell, S. S., Ruberry, E. J., & Somerville, L. H. (2010). The storm and stress of adolescence: insights from human imaging and mouse genetics. *Developmental psychobiology*, *52*(3), 225–235. https://doi.org/10.1002/dev.20447.

Chen, F., Zheng, D., Liu, J., Gong, Y., Guan, Z., & Lou, D. (2020). Depression and anxiety among adolescents during COVID-19: a cross-sectional study. *Brain, Behavior, and Immunity*, *88*, 36–38. https://doi.org/10.1016/j.bbi.2020.05.061.

Connell, J. P., & Wellborn, J. G. (1991). *Competence, autonomy, and relatedness: a motivational analysis of self-system processes*. In Self processes and development. (pp. 43–77). Hillsdale, NJ, US: Lawrence Erlbaum Associates, Inc.

Ellis, W. E., Dumas, T. M., & Forbes, L. M. (2020). Physically isolated but socially connected: psychological adjustment and stress among adolescents during the initial COVID-19 crisis. *Canadian Journal of Behavioural Science/Revue Canadienne des Sciences du Comportement*, *52*(3), 177.

Ellis, W. E., & Zarbatany, L. (2017). Understanding processes of peer clique influence in late childhood and early adolescence. *Child Development Perspectives*, *11*(4), 227–232.

Goldbeck, L., Schmitz, T. G., Besier, T., Herschbach, P., & Henrich, G. (2007). Life satisfaction decreases during adolescence. *Quality of Life Research*, *16*(6), 969–979.

Gravetter, F., Wallnau, L., Forzano, L., & Witnauer, J. (2020). Essentials of statistics for the behavioral sciences (10 ed.). New York: Cengage Learning.

Hawke, L. D., Barbic, S. P., Voineskos, A., Szatmari, P., Cleverley, K., Hayes, E., … Cheung, A. (2020). Impacts of COVID-19 on Youth Mental Health, Substance Use, and Well-being: A Rapid Survey of Clinical and Community Samples. *The Canadian Journal of Psychiatry*, *65*(10), 701–709. https://doi.org/10.1177/0706743720940562.

Huang, Y., & Zhao, N. (2020). Generalized anxiety disorder, depressive symptoms and sleep quality during COVID-19 outbreak in China: a web-based cross-sectional survey. *Psychiatry Research*, *288* (112954). https://doi.org/10.1016/j.psychres.2020.112954.

Huebner, E. S. (1994). Preliminary development and validation of a multidimensional life satisfaction scale for children. *Psychological Assessment*, *6*(2), 149.

IBM Corp. (2019). *IBM SPSS statistics software: SPSS statistics V26*. Armonk, NY: IBM Corp.

Judd, C. M., Kenny, D. A., & McClelland, G. H. (2001). Estimating and testing mediation and moderation in within-subject designs. *Psychological Methods*, *6*(2), 115.

Kenny, D. A. (2018). Moderator variables: introduction. http://davidakenny.net/cm/moderation.htm.

La Greca, A. M., & Harrison, H. M. (2005). Adolescent peer relations, friendships, and romantic relationships: do they predict social anxiety and depression? *Journal of Clinical Child & Adolescent Psychology*, *34*(1), 49–61. https://doi.org/10.1207/s15374424jccp3401_5.

Lee, R. M., & Robbins, S. B. (1995). Measuring belongingness: the social connectedness and the social assurance scales. *Journal of Counseling Psychology*, *42*(2), 232.

Loades, M. E., Chatburn, E., Higson-Sweeney, N., Reynolds, S., Shafran, R., Brigden, A., & Crawley, E. (2020). Rapid systematic review: the impact of social isolation and loneliness on the mental health of children and adolescents in the context of COVID-19. *Journal of the American Academy of Child and Adolescent Psychiatry*, *S0890-8567*(0820), 30337–30333. https://doi.org/10.1016/j.jaac.2020.05.009.

Manczak, E. M., Ordaz, S. J., Singh, M. K., Goyer, M. S., & Gotlib, I. H. (2019). Time spent with parents predicts change in depressive symptoms in adolescents with major depressive disorder. *Journal of Abnormal Child Psychology*, *47*(8), 1401–1408. https://doi.org/10.1007/s10802-019-00526-5.

Meuwese, R., Cillessen, A. H. N., & Güroğlu, B. (2017). Friends in high places: a dyadic perspective on peer status as predictor of friendship quality and the mediating role of empathy and prosocial behavior. *Social Development*, *26*(3), 503–519. https://doi.org/10.1111/sode.12213.

Montoya, A. K. (2019). Moderation analysis in two-instance repeated measures designs: probing methods and multiple moderator models. *Behavior Research Methods*, *51*(1), 61–82. https://doi.org/10.3758/s13428-018-1088-6.

Montoya, A. K., & Hayes, A. F. (2017). Two-condition within-participant statistical mediation analysis: a path-analytic framework. *Psychological Methods*, *22*(1), 6.

Pappa, S., Ntella, V., Giannakas, T., Giannakoulis, V. G., Papoutsi, E., & Katsaounou, P. (2020). Prevalence of depression, anxiety, and insomnia among healthcare workers during the COVID-19 pandemic: a systematic review and meta-analysis. *Brain, Behavior, and Immunity, 88*, 901–907. https://doi.org/10.1016/j.bbi.2020.05.026.

Rapee, R. M., Oar, E. L., Johnco, C. J., Forbes, M. K., Fardouly, J., Magson, N. R., & Richardson, C. E. (2019). Adolescent development and risk for the onset of social-emotional disorders: a review and conceptual model. *Behaviour Research and Therapy, 123*, 103501. https://doi.org/10.1016/j.brat.2019.103501.

Richardson, C. E., Magson, N. R., Fardouly, J., Oar, E. L., Forbes, M. K., Johnco, C. J., & Rapee, R. M. (2020). Longitudinal associations between coping strategies and psychopathology in preadolescence. *Journal of Youth and Adolescence*. (in press).

Rose, A. J., & Rudolph, K. D. (2006). A review of sex differences in peer relationship processes: potential trade-offs for the emotional and behavioral development of girls and boys. *Psychological Bulletin*, *132*(1), 98.

Somerville, L. H. (2013). The teenage brain: sensitivity to social evaluation. *Current Directions in Psychological Science*, *22*(2), 121–127.

Somerville, L. H., Jones, R. M., & Casey, B. (2010). A time of change: behavioral and neural correlates of adolescent sensitivity to appetitive and aversive environmental cues. *Brain and Cognition*, *72*(1), 124–133.

Spence, S. H. (1998). A measure of anxiety symptoms among children. *Behaviour Research and Therapy*, *36*(5), 545–566.

Tamres, L. K., Janicki, D., & Helgeson, V. S. (2002). Sex differences in coping behavior: a meta-analytic review and an examination of relative coping. *Personality and Social Psychology Review*, *6*(1), 2–30. https://doi.org/10.1207/s15327957pspr0601_1.

Wang, C., Pan, R., Wan, X., Tan, Y., Xu, L., Ho, C. S., & Ho, R. C. (2020). Immediate psychological responses and associated factors during the initial stage of the 2019 coronavirus disease (COVID-19) epidemic among the general population in China. *International Journal of Environmental Research and Public Health*, *17*(5), 1729.

Wang, C., Pan, R., Wan, X., Tan, Y., Xu, L., McIntyre, R. S., … Sharma, V. K. (2020). A longitudinal study on the mental health of general population during the COVID-19 epidemic in China. Brain, Behavior, and Immunity.

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Judul Skripsi : **FAKTOR-FAKTOR YANG BERHUBUNGAN DENGAN KECEMASAN REMAJA SAAT PANDEMI COVID-19: STUDI LITERATUR**

Pembimbing I : **Susilawati, S.ST., M.Kes**

Pembimbing II : **Irwina Angelia Silvanasari, S.Kep., Ns., M.Kep**

Pembimbing I				Pembimbing II			
No.	**Tanggal**	**Materi yang dikonsulkan dan masukan pembimbing**	**TTD DPU**	**No.**	**Tanggal**	**Materi yang dikonsulkan dan masukan pembimbing**	**TTD DPA**
1.	29/09/2020	• Pengajuan judul • Penjelasan alasan judul yang diambil (masalah yang ditemukan)		1.	26/09/2020	• Pengajuan judul • Konsul latar belakang	
2.	04/10/2020	• Revisi judul		2.	05/10/2020	• Revisi judul	
3.	05/10/2020	• ACC judul • Lanjutkan BAB I		3.	08/10/2020	• ACC judul • Revisi latar belakang (faktor lain juga disebutkan di bagian kronologis)	

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4.	06/10/2020	Penjelasan poin-poin di BAB I : Latar belakang sesuai (MSKS), rumusan masalah, tujuan umum dan khusus, manfaat		4.	15/10/2020	Revisi BAB I • Cari teori kecemasan • Dibagian tujuan khusus ditulis faktor kecemasan • Bagian kronologis diperdalam lagi • Ditambahkan manfaat penelitian	
5.	12/10/2020	Konsul BAB I • Latar belakang sesuai MSKS		5.	22/10/2020	Revisi BAB I • Tata cara penulisan diperbaiki • Tambahkan referensi tentang faktor kecemasan • Solusi untuk mengatasi kecemasan masih belum tergali mendalam	
6.	29/11/2020	Revisi BAB I • Tujuan khusus dilihat dari faktor dominan saja • Perbaiki skala data • Tambahkan teori kecemasan • Lanjutkan BAB II		6.	30/11/2020	Revisi BAB I • Revisi tujuan khusus	
7.	09/12/2020	• Revisi BAB I • Konsul BAB II dan BAB III		7.	01/12/2021	Revisi BAB I • Ditambahkan faktor dominan yang berhubungan dengan kecemasan remaja di tujuan khusus • Lanjutkan BAB II dan BAB III	
8.	17/01/2021	Revisi BAB II • ACC BAB I • Revisi BAB II penambahan teori kecemasan • Perbaiki kerangka teori		8.	18/12/2021	Konsul BAB II • Lanjutkan BAB III	

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9.	27/02/2021	Revisi BAB II • Tambahkan patofisiologi kecemasan • Perbaiki kerangka teori		9.	04/01/2021	• Pastikan diartikel yang sudah ditemukan ada faktor yang ditulis di tujuan khusus	
10.	08/03/2021	• ACC BAB II • ACC BAB III • Tambahkan lampiran rekap artikel yang sudah didapatkan		10.	18/02/2021	• Tata cara penulisan cek panduan • Faktor-faktor ditulis semua dikerangka teori	
11.	09/04/2021	• Membuat tabel rekap artikel • Revisi kerangka teori • ACC Ujian proposal		11.	17/03/2021	• Tata cara penulisan cek panduan • Revisi kata pengantar (setiap ucapan terimakasih dituliskan alasannya apa	
				12.	30/03/2021	• Untuk penulisan karya ilmiah spasi 2 • ACC Ujian sempro	

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Pembimbing I				Pembimbing II			
No.	**Tanggal**	**Materi yang dikonsulkan dan masukan pembimbing**	**TTD DPU**	**No.**	**Tanggal**	**Materi yang dikonsulkan dan masukan pembimbing**	**TTD DPA**
1.	03/08/2021	Konsul BAB 4,5,6		1.	04/08/2021	Konsul BAB 4,5,6	
2.	05/08/2021	Revisi • Dalam tabel hasil tambahkan tujuan dalam artikel • Dalam tabel hasil tambahkan variabel dalam penelitian • Tambahkan persentase dalam tabel		2.	05/08/2021	Revisi • Cover sesuaikan dengan template yang baru • Revisi abstrak • Revisi tabel hasil pencarian jurnal	

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3.	06/08/2021	Konsul revisi BAB 4,5,6		3.	06/08/2021	Konsul revisi BAB 4,5,6	
4.	08/08/2021	Revisi • Faktor kecemasan sesuai tujuan khusus di bahas di bab hasil • Hasil kecemasan dibuat tabel dan tambahkan deskripsinya		4.	07/08/2021	Revisi • Karakteristik responden: tuliskan rentang usia remaja • Pada pembahasan tuliskan opini peneliti • Tambahkan kecemasan remaja dari 5 artikel yang di analisis	
5.	10/08/2021	Revisi • Abstrak: hasil di abstrak sesuaikan dengan kesimpulan tetapi diringkas • Tambahkan saran • Pada abstak harus ada IMRAD		5.	08/08/2021	Revisi • Abstak: isi pendahuluan terlalu panjang, cukup ada urgensi masalah dan tujuan penelitian saja • Lampiran • Tambahkan faktor kecemasan di bab hasil • Kesimpulan disesuaikan dengan tujuan khusus	
6.	12/08/2021	ACC Ujian		6.	09/08/2021	ACC Ujian