# FAKTOR YANG MEMPENGARUHI RESILIENSI PERAWAT SELAMA MASA PANDEMI COVID-19

***LITERATUR REVIEW***

**SKRIPSI**

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**PROGRAM STUDI ILMU KEPERAWATAN**
**FAKULTAS ILMU KESEHATAN**
**UNIVERSITAS dr. SOEBANDI**
**2022**

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Untuk Memenuhi Persyaratan Pelaksanaan Penelitian *Literatur Review*

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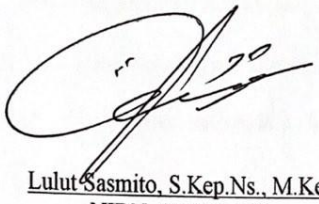
## LEMBAR PERSETUJUAN

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

Jember, 29 Juli 2022

Pembimbing I



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# PERNYATAAN KEASLIAN PENELITIAN

Yang bertandatangan di bawah ini :

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| Tempat, tanggal lahir | : | Lumajang, 25 Desember 2000 |
| NIM | : | 18010137 |

Menyatakan dengan sebenar-benarnya bahwa Skripsi *literatur review* ini adalah asli dan belum pernah diajukan sebagai syarat penelitian, baik di Universitas dr. Soebandi Jember maupun di perguruan tinggi lain. Skripsi *literatur review* ini murni gagasan dan rumusan saya sendiri tanpa bantuan pihak lain, kecuali arahan Tim Pembimbing. Dalam perumusan skripsi *literatur review* ini tidak terdapat karya atau pendapat orang lain yang telah ditulis serta dipublikasikan, kecuali secara tertulis dengan jelas dicantumkan dalam daftar pustaka. Apabila dikemudian hari terdapat penyimpangan dan ketidakbenaran dalam pernyataan ini, maka saya bersedia menerima sanksi akademik dan atau sanksi lainnya, sesuai dengan norma yang berlaku dalam perguruan tinggi ini.

Jember, 4 Juli 2022

Yang me[illegible]


**Nailah F[illegible]**

**NIM. 18010137**

# LEMBAR PENGESAHAN

*Skipsi* yang berjudul "**Faktor Yang Mempengaruhi Resiliensi Perawat Selama Masa Pandemi Covid-19**" telah diuji dan disahkan oleh Program Studi Ilmu Keperawatan pada:

Hari : Kamis
Tanggal : 4 Agustus 2022
Tempat : Program Studi Ilmu Keperawatan Universitas dr. Soebandi Jember

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# PERSEMBAHAN

Skripsi ini saya persembahkan bagi:

1. Allah SWT Pencipta semesta alam yang telah memberi saya hidup, keberkahan, dan keridhoan-Nya sehingga skripsi ini bisa selesai berjalan dengan lancar.
2. Ayah dan Ibu tercinta, terimakasih telah membesarkan dan mendidik saya hingga saya mampu mencapai pendidikan saat ini, dan tidak lupa juga terimakasih atas kasih sayang serta doa dan dukungan yang ayah ibu beri selama ini.
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# MOTTO

Sesungguhnya hanya orang- orang yang bersabarlah yang
dicukupkan pahala mereka tanpa batas
(QS. Az- Zumar: 10*)

Dari Abu Hurairah Radiyallahu anhu ia berkata: Rasulullah Sallallahu ‘alaihi Wasallam bersabda: “Barangsiapa yang meringankan kesusahan seorang mukmin di antara kesusahan-kesusahan dunia, niscaya Allah akan meringankan kesusahannya di antara kesusahan-kesusahan hari kiamat
(HR. Muslim**)

*) Qur’an dan Terjemahan Magfirah, Mushaf dan Tashih Kementerian Agama Republik Indonesia.

**) Muslim, Terjemahan Shahih Bukhari Muslim/, Terjemahan oleh Al Lu’Lu wal Marjan (Jabbal, 2015). No. 2699

# ABSTRAK

Hidayah, Fathiyatul Nailah*, Sasmito, Lulut** Amrullah, Akhmad Efrizal***.2022. **Faktor yang mempengaruhi resiliensi perawat selama masa pandemi covid-19**. Skripsi. Program Studi Ilmu Keperawatan Universitas dr. Soebandi Jember

**Pendahuluan:** Covid-19 memicu reaksi psikologis pada perawat. Reaksi psikologis tersebut berhubungan dengan stres sehingga dibutuhkan suatu koping yang adaptif bagi perawat selama masa pandemic covid-19 melalui resiliensi. Penelitian ini bertujuan untuk menjelaskan faktor yang mempengaruhi resiliensi perawat selama masa pandemi Covid-19 berdasarkan *literatre review*. **Metode:** Desain penelitian adalah *Literatur review.* Database menggunakan *google scholar, PubMed, Elsevier* dengan pendekatan PEOS *framework.* Enam artikel teridentifikasi sesuai kriteria. **Hasil:** Sepanjang masa pandemic covid-19 diketahui bahwa tingkat resiliensi perawat berada pada kategori cukup hingga tinggi. Faktor internal yang berhubungan dengan resiliensi perawat diantaranya usia, jenis kelamin, *self estem*, sensitifitas interpersonal (*interpersonal sensitivity*) dan pengalaman traumatic. Faktor eksternal yang berhubungan dengan resiliensi perawat diantaranya lama kerja, tingkat pendidikan, status pekerjaan (kepegawaian) dan tingkat stress *emergency*. **Diskusi:** Memberikan referensi kepada perawat mengenai factor yang mempengaruhi resiliensi pada perawat untuk meningkatkan kinerja mereka yang membutuhkan dukungan dan penyembuhan agar dapat kembali bekerja dengan aman

Kata Kunci : Covid-19, Perawat, Pandemic, Resiliensi

*Peneliti
** Pembimbing 1
***Pembimbing 2

# *ABSTRACT*

Hidayah, Fathiyatul Nailah*, Sasmito, Lulut** Amrullah, Akhmad Efrizal***.2022. ***Factors Affecting Nurse Resilience During The Covid-19 Pandemic.*** *Undergraduated Thesis. Nursing Science Study Program, dr. Soebandi University*

***Introduction:*** *Covid-19 triggers psychological reactions in nurses. This psychological reaction is related to stress so that an adaptive coping is needed for nurses during the covid-19 pandemic. This study aims to explain the factors that affect the resilience of nurses during the Covid-19 pandemic based on a literature review.* ***Methods:*** *The research design was a literature review. The database uses Google Scholar, PubMed, Elsevier with the PEOS framework approach. Six articles fit the Criteria.* ***Results:*** *During the covid-19 pandemic, it was known that the nurse's resilience level was in the moderate to high category.* ***Analysis:*** *Internal factors related to nurse resilience include age, gender, self-esteem, interpersonal sensitivity (interpersonal sensitivity) and traumatic experiences. External factors related to nurse resilience include length of work, education level of employment status (employment) and level of emergency stress.* ***Discussion:*** *Giving information to nurses about factors that affect of resilience in nurses to improve the performance of those who need support and healing in order to return to work safely*

*Keywords : Covid-19, Nurse, Pandemic, Resilience*

** Researcher*
*** Advicer 1st*
**** Advicer 2nd*

# KATA PENGANTAR

Puji Syukur Kepada Tuhan Yang Maha Esa yang telah melimpahkan rahmat dan hidayah-Nya sehingga penyusunan skripsi *literatur review* ini dapat terselesaikan. Skripsi *literatur review* ini disusun untuk memenuhi salah satu persyaratan menyelesaikan pendidikan pada Program Studi Ilmu Keperawatan Universitas dr. Soebandi dengan judul "**Faktor Yang Mempengaruhi Resiliensi Perawat Selama Masa Pandemi Covid-19**". Selama proses penyusunan skripsi *literatur review* ini peneliti dibimbing dan dibantu oleh berbagai pihak, oleh karena itu peneliti mengucapkan terima kasih kepada :

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5. Ns. Akhmad Efrizal Amrullah, S.Kep., M.Si selaku pembimbing II yang membantu bimbingan dan memberikan masukan dan saran demi kesempurnaan skripsi *literatur review*

Dalam penyusunan skripsi *literatur review* ini peneliti menyadari masih jauh dari kesempurnaan, untuk itu peneliti sangat mengharapkan kritik dan saran untuk perbaikan di masa mendatang.

Jember, 4 Juli 2022

Peneliti

# DAFTAR ISI

# DAFTAR TABEL

# DAFTAR GAMBAR/DIAGRAM

# DAFTAR LAMPIRAN

# DAFTAR ARTI LAMBANG DAN SINGKATAN

| | | |
|---|---|---|
| ARDS | : | *Acute Respiratory Distress Syndrome* |
| Covid-19 | : | Corona Virus -19 |
| KLB | : | Kejadian Luar Biasa |
| MERS | : | *Middle East Respiratory Syndrome* |
| PK | : | Perawat Klinis |
| PM | : | Perawat Manajer |
| PP | : | Perawat Pendidik |
| PR | : | Perawat Peneliti/Riset |
| SARS-CoV-2 | : | *Severe Acute Respiratory Syndrome Coronavirus* 2 |
| SARS | : | *Severe Acute Respiratory Syndrome* |
| SARI | : | *Severe Acute Respiratory Infection*-SARI |
| WHO | : | *World Heath Organization* |

# BAB 1

# PENDAHULUAN

## 1.1 Latar Belakang

Tingginya angka kematian tersebut menempatkan perawat sebagai garda terdepan dalam penanganan covid-19 dengan risiko paparan yang sangat tinggi (Sterling, 2020). Risiko paparan yang tinggi oleh karena Covid-19 berakibat pada risiko kesehatan baik berupa risiko fisik maupun psikologis yang dialami oleh perawat (Shan & Shang, 2021). Selain ancaman oleh virus itu sendiri, tidak ada keraguan bahwa tindakan karantina, yang dilakukan di banyak negara, memiliki efek psikologis negatif, semakin meningkatkan gejala stres. Tingkat keparahan gejala sebagian tergantung pada durasi dan luas karantina, perasaan kesepian, ketakutan terinfeksi, informasi yang memadai, dan stigma, pada kelompok yang lebih rentan termasuk gangguan kejiwaan bagi petugas kesehatan (Belingheri & Riva, 2020).

*International Council of Nurses* (2021) hingga 31 Oktober 2021 secara global menemukan lebih dari 1,6 juta perawat telah terinfeksi di dengan angka kematian hingga 30%, serta 2.262 kematian perawat di Asia. Di Indonesia, insiden kematian pada perawat akibat corona virus mencapai 637 kasus yang menempatkan Indonesia dengan kematian perawat tertinggi akibat covid-19 di Asia Tenggara (Satuan Tugas Penanganan Covid-19, 2021). Pada aspek psikologis, Ikatan Perawat Kesehatan Jiwa Indonesia/IPKJI (2020) mengungkapkan bahwa 70% perawat di Indonesia mengalami perasaan cemas dan ketegangan. Laporan tersebut dudukung oleh

Huang (2020) bahwa dari 1.257 perawat prevalensi 50% mengalami depresi, 45% mengalami gejala kecemasan dan 71,5% mengalami tekanan psikologis selama pandemic covid-19.

Penyakit Coronavirus 2019 (Covid-19) merupakan pandemi,yang menyebar secara massif dengan insiden tinggi di seluruh dunia (Ritchie *et al*., 2020). Insiden yang tinggi pada Covid-19 merupakan dampak dari mudahnya virus tersebut menular dari orang ke orang dalam jarak sekitar 6 kaki melalui tetesan pernapasan yang dihasilkan dari batuk atau bersin (Sutaryo, Sabrina, et al., 2020). Coronavirus 19 berdampak utama pada system pernapasan dengan implikasi klinis berupa sindroma pernapasan akut (SARS-CoV-2) sehingga berdampak pada kematian (Felice & Tanna, 2020).

Lopez et al (2020) menjelaskan bahwa situasi covid-19 saat ini memicu tekanan dan berbagai reaksi psikologis pada perawat. Reaksi psikologis tersebut berhubungan dengan stres sebagai respons terhadap pandemi covid-19 dapat mencakup perubahan konsentrasi, iritabilitas, kecemasan, insomnia, berkurangnya produktivitas, dan konflik antarpribadi sehingga dibutuhkan suatu koping yang adaptif bagi perawat selama masa pandemic covid-19 (Belingheri & Riva, 2020). Merujuk pada *Self-Determination Theory* dan *PSI-Theory* bahwa dengan mempertimbangkan faktor biologis, psikologis, sosial secara bersama – sama merupakan bentuk koping adaptasi berupa resiliensi perawat (Tuason, 2021).

Resiliensi merupakan suatu kemampuan untuk mengatasi dan beradaptasi terhadap kejadian yang berat atau masalah yang terjadi dalam kehidupannya. Bertahan dalam keadaan yang tertekan dan bahkan berhadapan

dengan kesulitan atau trauma yang telah dialami dalam kehidupannya (Hendriani, 2018). Pekerja yang resilien ketika menghadapi tantangan akan semakin mungkin membantu teman kerjanya tanpa mengharapkan akan diberi sebuah imbalan, mereka dapat memberikan ide yang bagus serta mematuhi peraturan untuk menghindari konflik dengan pekerja lain serta menyadari tanggung jawabnya tanpa tekanan (Amir, 2017). Resiliensi akan menjadi faktor penghambat stres individu dalam menghadapi tuntutan pekerjaan. Resiliensi yang rendah akan memicu tingkat stres yang tinggi dan memunculkan penurunan semangat kerja pada individu sehingga berdampak pada kinerja individu (Hardiyati, 2020)**.**

Resilensi merupakan upaya individu mampu menyesuaikan diri, bertahan dan bersikap positif saat dihadapkan pada situasi yang menekan, dibutuhkan kemampuan resiliensi untuk bangkit kembali sehingga dapat meminimalisir dan mencegah munculnya berbagai pengalaman psikologis yang buruk. Untuk mengembangkan kemampuan resiliensi, seseorang diharapkan mampu mengenali sumberdaya bagi pembentukan sikap resilien, diantaranya memaknai besarnya dukungan sosial yang diberikan lingkungan terhadap dirinya, memiliki kualitas pribadi seperti empati, percaya diri, optimistik dan bertanggung jawab terhadap diri sendiri, dan memiliki keterampilan sosial dalam berkomunikasi, baik intrapersonal maupun interpersonal (Hendriani, 2018)

Berdasarkan hal tersebut diperlukan sebuah studi dengan menggunakan kajian *literatur review* berupa faktor yang mempengaruhi resiliensi perawat selama masa pandemi Covid-19

## 1.2 Rumusan Masalah

Berdasarkan latar belakang diatas dapat dirumuskan sebuah pertanyaan penelitian berupa "Apa saja faktor yang mempengaruhi resiliensi perawat selama masa pandemi Covid-19 berdasarkan *literatur review*?"

## 1.3 Tujuan

### 1.3.1 Tujuan Umum

Berdasarkan pendekatan *literatur review* maka tujuan umum dari penelitian ini yaitu untuk menjelaskan faktor yang mempengaruhi resiliensi perawat selama masa pandemi Covid-19

### 1.3.2 Tujuan Khusus

Tujuan khusus dari penelitian ini adalah:

1) Menjelaskan resiliensi perawat selama masa pandemi Covid-19 berdasarkan *literatur review*
2) Menjelaskan faktor internal yang mempengaruhi resiliensi perawat selama masa pandemi Covid-19 berdasarkan *literatur review*
3) Menjelaskan faktor eksternal yang mempengaruhi resiliensi perawat selama masa pandemi Covid-19 berdasarkan *literatur review*

## 1.4 Manfaat Penelitian

### 1.4.1 Teoritis

1) Bagi perkembangan ilmu keperawatan diharapkan penelitian ini dapat memberikan kontribusi positif bagi perkembangan Ilmu

Keperawatan khususnya Manajemen Keperawatan dan masukan dalam kajian terbaru selama masa pandemi covid-19

2) Bagi penulis diharapkan penelitian ini memberikan pengalaman baru bagi penulis sebagai peneliti pemula khususnya dalam hal Manajemen Keperawatan utamanya terkait dengan manajemen staf selama menghadapi pandemic
3) Bagi peneliti diharapkan penelitian ini menjadi sumber data bagi penelitian selanjutnya serta sebagai dasar untuk pengembangan penelitian selanjutnya baik penelitian kuantitatif maupun kualitatif yang berkaitan dengan Manajemen Keperawatan dan Kepemimpinan dalam Keperawatan utamanya dalam pengelolaan selama masa pandemi covid-19

### 1.4.2 Praktis

1) Bagi pengambil kebijakan diharapkan hasil penelitian ini dapat digunakan sebagai dasar pengambilan kebijakan dalam upaya peningkatan kinerja staf keperawatan dan optimalisasi model peran organisasi dalam meningkatkan kinerja staf selama masa pandemi covid-19. Serta memberikan mediasi konseling kesehatan jiwa sebagai upaya meningkatkan adaptasi psikologis bagi tenaga kesehatan
2) Bagi perawat diharapkan hasil penelitian ini dapat meningkatkan mutu pelayanan khususnya mutu pelayanan keperawatan serta terjaminnya keselamatan pasien dengan optimalisasi kinerja dan resiliensi bagi tenaga kesehatan. Serta mampu memberikan

informasi terkait resiliensi dan akhirnya akan meningkatkan kinerja perawat

# BAB 2

# TINJAUAN PUSTAKA

## 2.1 Konsep Resiliensi

### 2.1.1 Pengertian

Resiliensi didefinisikan sebagai kemampuan individu untuk menghadapi, mengatasi dan mendapatkan kekuatan dan mampu mencapai transformasi diri setelah mengalami kesulitan, hal ini karena berangkat dari kesulitan seorang individu akan menemukan jalan untuk pemecahan masalah yang telah dialami oleh individu tersebut. Resiliensi berawal dari prinsip bahwa setiap orang akan mengalami kesulitan dan menghadapi permasalahan dalam kehidupannya sehingga resilensi dapat diartikan sebagai kemampuan individu dalam menilai,meningkatkan serta mengatasi diri atau merubah diri dari keterpurukan dan kesengsaraan hidup (Hendriani, 2018).

Resiliensi dipandang sebagai kemampuan hidup manusia dalam merespon dengan cara yang sehat dan produktif ketika berhadapan dengan kesulitan maupun trauma, hal tersebut merupakan sesuatu yang sangat penting untuk mengendalikan tekanan hidup sehari-hari. Resiliensi merupakan cara berfikir yang memungkinkan indovidu mampu untuk mencari berbagai pengalaman serta memandang bahwa hidupnya sebagai suatu kegiatan yang sedang berjalan (Munawaroh & Mashudi, 2019)

Resiliensi merupakan kemampuan individu dalam mengatasi dengan baik perubahan hidup pada level yang lebih tinggi serta tetap

menjaga kesehatan dalam situasi penuh tekanan dan bangkit dari keterpurukan, mengatasi kemalangan dan merubah cara hidup ketika cara hidup yang lama dirasa tak sesuai lagi dengan kondisi yang ada serta menyelesaikan permasalahan tanpa menggunakan kekerasan (Simich & Andermann, 2014).

Definisi lain menyatakan bahwa resiliensi merupakan kemampuan individu untuk dapat bangkit dengan sukses meskipun mengalami situasi yang penuh risiko, serta menjadi seorang individu yang pernah mengalami kegagalan sebelumnya tidak akan mudah untuk kembali menjadi individu sukses butuh sebuah proses meskipun dalam proses tersebut banyak risiko yang akan dihadapi (Smith & Ascough, 2016).

Individu dengan resiliensi yang rendah akan cenderung membutuhkan waktu yang lebih lama untuk mampu menerima apapun cobaan yang datang dan sebaliknya jika tingkat resiliensi individu tersebut tinggi maka akan cenderung lebih kuat dan akan segera bangkit dari keterpurukkan serta berusaha mencari solusi terbaik untuk memulihkan keadaanya. Hal tersebut berhubungan dengan faktor risiko dan faktor protektif yang dimiliki oleh indvidu dalam menghadapi kondisi-kondisi sulit dalam hidupnya (Sinnott, 2013).

### 2.1.2 Aspek Resiliensi

Smith & Ascough (2016) menyatakan bahwa terdapat tujuh aspek yang menunjukkan resilensi pada seorang individu yaitu regulasi emosi, pengendalian impuls, optimisme, empati, analisa kausal, *self efficacy* dan *reaching out.*

a. Regulasi Emosi

Regulasi emosi merupakan kemampuan untuk tetap tenang pada kondisi yang menekan (Sinnott, 2013). Simich & Andermann (2014) mengungkapkan terdapat 2 keterampilan untuk dapat memudahkan seorang individu untuk melakukan regulasi emosi yaitu:

1) Tenang

Seorang individu dapat mengurangi rasa stress yang dirasakan dengan cara merubah cara berpikir mereka saat berhadapan dengan stressor.

2) Fokus

Kemapuan untuk dapat fokus pada permasalahan yang ada dapat memudahkan seorang individu untuk menemukan solusi dari permasalahan yang ada.

b. Pengendalian Impuls

Pengendalian impuls merupakan kemampuan untuk mengontrol keinginan, kesukaan, dorongan serta tekanan yang muncul dari dalam diri. individu dengan pengendalian impuls yang rendah akan cepat mengalami perubahan emosi dan pada akhirnya mengendalikan pikiran dan perilaku seorang individu. Mereka akan menampilan perilaku yang mudah marah, tidak sabar, impulsif dan berlaku agresif. Perilaku yang ditampilkan oleh individu tersebut akan membuat orang disekelilingnya merasa tidak nyaman dan berakibat pada buruknya hubungan sosial individu dengan individu lainnya (Hendriani, 2018). Kemampuan seorang individu untuk dapat mengendalikan impuls sangat terkait

dengan kemampuannya dalam meregulasi emosi yang ia miliki. Individu dengan skor *resilience quotient* yang tinggi pada faktor regulasi emosi cenderung akan memiliki skor *resilience quotient* pada faktor pengendalian impuls (Kashdan & Ciarrochi, 2013).

c. Optimisme

Optimisme terkait dengan karakteristik yang diinginkan oleh individu, kebahagiaan, ketekunan, prestasi dan kesehatan. Individu yang optimis mempercayai bahwa situasi yang sulit pada suatu saat dapat berubah menjadi situasi yang lebih baik. Mereka mempunyai harapan di masa depan mereka dan mempercayai bahwa merekalah yang memegang kendali arah hidup mereka (Rushton, 2018). Seorang individu yang optimis akan memiliki kesehatan yang lebih baik, mereka jarang mengalami depresi dan memiliki produktivitas kerja yang tinggi jika dibandingkan dengan seorang individu yang pesimis (Sinnott, 2013). Optimisme, berarti bahwa kita melihat masa depan relatif cerah. Implikasi dari optimisme adalah individu percaya mereka mempunyai kemampuan untuk mengatasi kesulitan yang mungkin terjadi di masa depan (Rushton, 2018).

d. Analisa Kausal

Analisa kausal mengacu pada kemampuan seorang individu untuk dapat mengidentifikasikan secara akurat penyebab dari permasalahan yang mereka hadapi. Seorang individu yang tak mampu mengidentifikasikan penyebab dari permasalahan yang sedang mereka

hadapi secara tepat, akan terus melakukan kesalahan-kesalahan yang sama (Kashdan & Ciarrochi, 2013).

e. Empati

Seorang individu yang tidak memiliki kemampuan untuk dapat membaca tanda-tanda nonverbal orang lain akan sangat merugikan, baik dalam hubungan pribadi maupun hubungan kerja, hal ini disebabkan karena kebutuhan dasar manusia untuk dipahami dan dihargai. Seorang individu yang memiliki kemampuan empati yang rendah akan cenderung mengulang pola yang dilakukan oleh individu yang tidak resilien, yaitu akan menyamaratakan semua keinginan dan emosi orang lain (Hendriani, 2018).

*f. Self-efficacy*

*Self-efficacy* merupakan keberhasilan dari suatu pemecahan masalah. *Self efficacy* mempresentasikan keyakinan bahwa individu dapat memecahkan sebuah masalah yang sedang dialami dan mencapai kesuksesan (Bandura, 2019).

*g. Reaching out*

*Reaching out* merupakan kemampuan individu meraih aspek positif atau kemampuan untuk mengambil hikmah dari setiap kemalangan yang menimpa selama masa kehidupan (Bandura, 2019).

### 2.1.3 Fungsi Resiliensi

Resiliensi memiliki empat fungsi fundamental dalam kehidupan manusia yaitu (Smith & Ascough, 2016):

a. Mengatasi hambatan-hambatan pada masa kecil

Melewati masa kecil yang sulit memerlukan usaha keras, membutuhkan kemampuan untuk tetap fokus dan mampu membedakan mana yang dapat dikontrol dan mana yang tidak (Smith & Ascough, 2016)

b. Melewati tantangan-tantangan dalam kehidupan sehari-hari

Setiap orang membutuhkan resiliensi karena dalam kehidupan ini kita diperhadapkan oleh masalah, tekanan, dan kesibukan-kesibukan. Orang yang resilien dapat melewati tantangan-tantangan tersebut dengan baik. Penelitian menunjukkan hal esensi yang paling penting untuk menghadapi tantangan adalah *self-efficacy*, yakni suatu kepercayaan bahwa kita dapat menghadapi lingkungan dan menyelesaikan masalah (Smith & Ascough, 2016).

c. Bangkit kembali setelah mengalami kejadian traumatik atau kesulitan besar

Beberapa kesulitan tertentu dapat membuat trauma dan membutuhkan resiliensi yang lebih tinggi dibanding tantangan kehidupan sehari-hari. Kejatuhan yang kita alami sangat ekstrem, yang membuat kita secara emosional hancur, keadaan yang seperti ini membutuhkan pantulan resiliensi untuk pulih (Smith & Ascough, 2016)

d. Mencapai prestasi terbaik

Beberapa orang memiliki kehidupan yang sempit, mempunyai kegiatan yang rutin setiap harinya. Merasa nyaman dan bahagia ketika segala sesuatunya berjalan dengan lancar. Sebaliknya, ada juga orang yang marasa senang ketika bisa menjangkau orang lain dan mencari pengalaman baru. Sebagaimana resiliensi dibutuhkan untuk mengatasi pengalaman negatif, mengatasi stres, pulih dari trauma, resiliensi juga dibutuhkan untuk memperkaya arti kehidupan, hubungan yang dalam, terus belajar dan mencari pengalaman baru (Smith & Ascough, 2016).

### 2.1.4 Faktor Internal dan Eksternal yang Memengaruhi Resiliensi

Menjelaskan bahwa terdapat faktor internal dan eksternal yang memengaruhi resiliensi diantaranya yaitu:

a. Faktor Internal

1) Usia

Ahami & Azzaoui (2018) memaparkan mengenai rata-rata skor resiliensi anak yang muda (berkisar umur 4-12 tahun) adalah 38,8 dan skor resiliensi rata-rata untuk anak yang lebih tua (berkisar 13-17 tahun) adalah 42,2. Dari skor tersebut dapat diartikan bahwa bahwa anak yang lebih tua lebih resiliensi dibanding anak yang lebih muda. Sejalan dengan penelitian. tingkat resiliensi yang anak lebih tua lebih tinggi dibanding anak yang lebih muda. Dapat dikatakan karena seiring bertambahnya usia yang akan menunjukkan peningkatan emotional regulation yang baik. Dengan begitu diharapkan semakin bertambahnya usia kronologis remaja

semakin remaja memiliki ketangguhan atau resiliensi yang baik (Baskin & Bartlet, 2021)

2) Jenis kelamin

Terdapat banyak penelitian yang mengungkapkan bahwa terdapat perbedaan resiliensi antara laki-laki dan perempuan. Salah satu yang membahas mengenai jenis kelamin mempengaruhi resiliensi. perempuan memiliki tingkat resiliensi yang lebih tinggi dibanding laki-laki (Ahami & Azzaoui, 2018).

3) Personal (*Self Estem dan* emosi positif)

*Self esteem* adalah suatu hasil penilaian individu terhadap dirinya yang diungkapkan dalam sikap positif dan negatif. Self esteem berkaitan dengan bagaimana orang menilai tentang dirinya akan mempengaruhi perilaku dalam kehidupan sehari-hari. Memiliki self- esteem yang baik pada masa individu dapat membantu individu dalam mengahadapi kesengsaraan hidup karena dapat menilai sesuatu hal dari sisi yang lebih positif. Emosi positif juga merupakan faktor penting dalam pembentukan resiliensi individu. Emosi positif sangat dibutuhkan ketika menghadapi suatu situasi yang kritis dan dengan emosi positif dapat mengurangi stress secara lebih efektif. Individu yang memiliki rasa syukur mampu mengendalikan emosi negatif dalam menghadapi segala permasalahan di dalam kehidupan (Praholapati, 2020).

b. Faktor Eksternal

1) Dukungan keluarga

Dukungan sosial adalah pertolongan yang diperoleh seseorang dari interaksinya dengan orang lain dimana bantuan tersebut dapat menaikkan perasaan positif sehingga akan berdampak pada kesejahteraan individu secara umum. Seseorang yang mengalami kesulitan dan kesengsaraan akan meningkatkan resiliensi dalam dirinya ketika pelaku sosial yang ada di sekelilingnya memberikan dukungan terhadap penyelesaian masalah atau proses bangkit kembali yang dilakukan oleh individu tersebut karena adanya pertolongan dan bantuan dari orang lain. Keluarga adalah perkumpulan dua orang atau lebih individu yang hidup bersama dalam keterikatan emosional dan setiap individu memiliki peranannya masing-masing. Keluarga sangat berpengaruh besar terhadap resiliensi. Dukungan keluarga serta keterkaitan emosional antar anggota keluarga juga sangat diperlukan istri yang menikah dini dalam menghadapi berbagai tekanan dan permasalahan dalam rumahtangganya serta dapat mendukung pemulihan individu yang mengalamistres atau trauma (Bhaumik & Moola, 2020).

2) Dukungan lingkungan kerja

Kondisi fisik (kondisi kerja) merupakan keadaan kerja dalam perusahaan yang meliputi penerangan tempat kerja, penggunaan warna, pengaturan suhu udara, kebersihan, dan ruang gerak. Kondisi non fisik (iklim kerja) sebagai hasil persepsi pegawai

terhadap lingkungan kerja tidak dapat dilihat atau disentuh tetapi dapat dirasakan oleh pegawai tersebut. Iklim kerja dapat dibentuk oleh para pemimpin yang berarti pimpinan tersebut harus mempunyai kemampuan dalam membentuk iklim kerja tersebut (Baskin & Bartlet, 2021).

### 2.1.5 Dimensi Resiliensi

Terdapat beberapa dimensi dalam resiliensi diantaranya yaitu:

c. Kebermaknaan (*Meaningfulness*)

Kebermaknaan merupakan suatu kesadaran bahwa hidup memiliki tujuan

d. Ketenangan hati (*Equanimity*)

Ketenangan hati merupakan suatu perspektif mengenai keseimbangan dan harmoni yang dimiliki individu berkaitan tentang hidup berdasarkan pengalaman yang terjadi semasa hidupnya

e. Ketekunan (*Perseverance*)

Ketekunan yaitu suatu tindakan untuk bertahan meskipun harus menghadapi tantangan dan kesulitan

f. Kemandirian (*Self-Reliance*)

Kemandirian yaitu keyakinan individu terhdap diri serta kemampuan yang ia miliki. Melalui berbagai pengalaman, baik itu kesuksesan maupun kegagalan, individu yang resilien belajar untuk mengatasi masalahnya sendiri.

g. Eksistensial kesendirian (*Existensial aloneness*)

Eksistensial kesendirian merupakan suatu kesadaran bahwa jalan hidup setiap orang bersifat unik serta mampu menghargai keberadaan dirinya sendiri. Individu yang resilien mampu menghargai keberadaan dirinya sendiri. Individu yang resilien mampu berteman dengan dirinya sendiri dalam artian merasa puas, nayaman, dan menghargai keunikan yang ada pada dirinya.

## 2.2 Konsep Perawat

### 2.2.1 Definisi

Undang- undang Nomor 36 Tahun 2014 tentang Tenaga Kesehatan menyebutkan bahwa Tenaga Kesehatan adalah setiap orang yang mengabdikan diri dalam bidang kesehatan serta memiliki pengetahuan dan/atau keterampilan melalui pendidikan di bidang kesehatan yang untuk jenis tertentu memerlukan kewenangan untuk melakukan upaya kesehatan. Tenaga kesehatan wajib memiliki kompetensi dan sertifikasi. Kompetensi adalah kemampuan yang dimiliki seseorang Tenaga Kesehatan berdasarkan ilmu pengetahuan, keterampilan, dan sikap profesional untuk dapat menjalankan praktik. Berdasarkan ketentuan tersebut tenaga keperawatan merupakan tenaga Kesehatan yang meliputi perawat vokasi, ners, dan ners spesialis

Ketentuan dalam Undang- undang Nomor 38 Tahun 2014 tentang Keperawatan menyebutkan bahwa Perawat adalah seseorang yang telah lulus pendidikan tinggi Keperawatan, baik di dalam maupun di luar negeri

yang diakui oleh Pemerintah sesuai dengan ketentuan Peraturan Perundangundangan (Kementerian Hukum dan Hak Asasi Manusia, 2014).

Perawat merupakan suatu profesi yang mengabdi kepada manusia dan kemanusiaan, mendahulukan kesehatan masyarakat diatas kepentingan sendiri. Suatu bentuk pelayanan atau asuhan yang bersifat humanistik menggunakan pendekatan holistik dilaksanakan berdasarkan ilmu dan kiat keperawatan berpegang pada standar pelayanan atau asuhan keperawatan serta menggunakan kode etik keperawatan sebagai tuntutan utama dalam melaksanakan pelayanan asuhan keperawatan. Sedangkan menurut lokakarya nasional keperawatan (1983) Keperawatan adalah suatu bentuk pelayanan profesional yang merupakan bagian integral dari pelayanan kesehatan didasarkan pada ilmu dan kiat keperawatan berbentuk pelayanan bio psiko sosio spiritual yang komprehensif, di dituju ditujukan ke individu keluarga dan masyarakat baik sehat maupun sakit yang mencakup seluruh proses kehidupan manusia (Aini, 2018).

Keperawatan merupakan suatu bentuk pelayanan professional yang diberikan oleh perawat yang telah menyelesaikan pendidikan dan melalui serangkaian pengalaman yang memadai yang ditujukan untuk memenuhi kebutuhan dasar klien secara holistik dan komprehensif (Nursalam, 2017).

### 2.2.2 Bentuk Pengembangan Profesional Perawat Indonesia

Peraturan Menteri Kesehatan RI Nomor 40 Tahun 2017 menyebutkan bahwa pengembangan sistem jenjang karir profesional perawat pada pedoman ini ditujukan bagi perawat klinis yang melakukan praktik sebagai pemberi asuhan keperawatan di fasilitas pelayanan kesehatan. Secara utuh

jenjang karir profesional di Indonesia terdiri dari 4 bidang, meliputi Perawat Klinis (PK), Perawat Manajer (PM), Perawat Pendidik (PP) dan Perawat Peneliti/Riset (PR). Setiap bidang memiliki 5 (lima) level, dimulai level generalis, dasar kekhususan, lanjut kekhususan, spesialis, subspesialis/ konsultan. Untuk menjadi perawat manajer level I dipersyaratkan memiliki kompetensi perawat klinis level II. Untuk menjadi perawat pendidik level I dipersyaratkan memiliki kompetensi perawat klinis level III. Untuk menjadi perawat peneliti level I dipersyaratkan memilliki kompetensi perawat klinis level IV (Kementrian Kesehatan RI, 2017).

### 2.2.3 Kredensialing Sebagai Bentuk Legalitas Praktik Keperawatan

Proses utama kredensial ditujukan untuk mengendalikan kewenangan melakukan tindakan keperawatan yang terinci (*delination clinical privilege*) bagi setiap tenaga perawat yang bertumpu pada tiga tahap. Pertama, perawat melakukan permohonan untuk memperoleh kewenangan klinis dengan metode *self assessment*. Kedua, komite keperawatan dan sub komite kredensial mengkaji dan memberikan rekomendasi rincian kewenangan klinik keperawatan yang diajukan oleh pemohon. Ketiga, kepala rumah sakit menerbitkan surat penugasan (*clinical appointment*) berdasarkan rekomendasi dari ketua komite keperawatan yang berlaku untuk periode tertentu. Secara perodik, perawat akan melalui proses rekredensial saat masa berlaku surat penugasannya berakhir, dimana tiga proses inti tersebut akan berulang (Kementrian Kesehatan RI, 2017).

## 2.3 Konsep Pandemi Covid-19

### 2.1.6 Pengertian

Kementerian Kesehatan RI (2020) menjelaskan bahwa COVID-19 (*Coronavirus Disease* 2019) merupakan penyakit menular dimana yang menjadi penyebabnya adalah SARS-CoV-2 (*Severe Acute Respiratory Syndrome Coronavirus* 2). SARS-CoV-2 sendiri yakni *coronavirus* jenis baru dimana sebelumnya belum pernah diidentifikasi pada manusia. Diketahui setidaknya ada dua *coronavirus* jenis ini yang memicu penyakit yang bisa berakibat pada gejala berat semacam SARS (*Severe Acute Respiratory Syndrome)* dan MERS (*Middle East Respiratory Syndrome)* (Kementerian Kesehatan RI, 2020). Ada dua pendapat asal nama virus tersebut. Pertama, di bawah mikroskop elektron bentuk virus mirip korona pada gerhana matahari. Pada gerhana matahari ada cincin di sekitar gerhana yang disebut korona. Kedua, bentuk Virus Corona mirip dengan mahkota ratu atau raja. Dalam Bahasa Latin, corona berarti mahkota (Sutaryo, Yang, et al., 2020).

### 2.3.1 Etiologi

*Coronavirus* yang tergolong dalam *family coronavirus* merupakan penyebab COVID-19. virus tersebut yakni virus dengan RNA strain tunggal positif, tidak bersegmen dan berkapsul. 4 struktur protein utamanya yakni: protein E (selubung), glikoprotein spike S (*spike*), glikoprotein M (membran), dan protein N (*nukleokapsid*). *Coronavirus* termasuk keluarga *Coronaviridae* dengan ordo *Nidovirales*. *Coronavirus* yang mana merupakan COVID-19 bergenus *betacoronavirus* dimana secara umum

bentuknya bundar, berdiameter 60-140 nm, serta dengan beberapa pleomorfik. Ada 4 genus *Coronavirus* yakni *deltacoronavirus, gammacoronavirus*, *betacoronavirus*, dan *alphacoronavirus* Doremalen *et al* (2020) dalam (Kementerian Kesehatan RI, 2020)

### 2.3.2 Penularan

Virus Corona hidup dan menular melalui droplet yang keluar melalui mulut dan hidung orang yang terinfeksi. Droplet yakni partikel berisi air yang diameternya >5-10 µm. Virus Corona bisa bertahan hidup selama tiga jam di udara bebas serta bisa hidup lebih lama jika menempel pada permukaan benda di sekitar. Hal ini yang menyebabkan kemungkinan terjadinya penyebaran infeksi baru secara tidak langsung (Sutaryo, Yang, et al., 2020).

### 2.3.3 Karakteristik

Burhan *et al (*2020) menjelaskan bahwa *Coronavirus* berdiameter kisaran 50 hingga 200 mikron, sering pleimorfik, partikelnya berbentuk elips atau bulat, dan memiliki kapsul. *Virus* tersebut sifatnya sensitif akan panas serta bisa diinaktifkan secara efektif oleh desinfektan selama 30 menit bersuhu 56℃ yang mengandung kloroform, *oxidizing agent*, formalin, detergen non-ionik, asam perioksiasetat, alkohol, dan eter. Klorheksidin dalam menonaktifkan virus tidaklah efektif.

### 2.3.4 Manifestasi Klinis

Pasien menunjukkan gejala gangguan sistem pernapasan yang ringan dan demam. Waktu inkubasi Virus Corona Rerata adalah 5 hingga 6 hari dengan periode inkubasi bisa berbeda pada tiap individu hingga 14 hari

dari infeksi. Gejala yang paling umum ditemukan adalah demam dan batuk tidak berdahak. Hampir 90% kasus menunjukkan gejala demam dan 67% menunjukkan gejala batuk tidak berdahak. Kemudian disusul dengan 40% pasien mengeluhkan gejala *fatigue* (tidak enak badan/pegal-pegal) dan 33% pasien melaporkan adanya batuk berdahak. Gejala kesulitan bernapas (*dyspnea*) dilaporkan mencapai 18.6%. sebagian besar gejala yang dilaporkan oleh pasien covid-19 hampir sama dengan gejala flu. Namun, pasien covid-19 jarang mengeluhkan adanya gejala hidung tersumbat atau pilek dibandingkan dengan flu pada umumnya (Sutaryo, Yang, et al., 2020). Burhan *et al*., (2020) menjelaskan bahwa sindrom klinis yang bisa terjadi apabila terinfeksi dapat berupa:

2.3.4.1 Tidak berkomplikasi

Adalah kondisi yang paling ringan. Gejalanya berwujud gejala yang tidak spesifik. Umumnya gejala utamanya tetap dialami semisal nyeri otot, sakit kepala, malaise, kongesti hidung, nyeri tenggorokan, batuk, dan demam.

2.3.4.2 Pneumonia ringan

Gejala utamanya yakni sesak, batuk, dan demam. Akan tetapi tidak ditemukan gejala pneumonia berat.

2.3.4.3 Pneumonia berat

Pasien dewasa gejala yang muncul diantaranya indikasi infeksi saluran napas dan demam. Gejala yang timbul yakni takipnea (dengan frekuensi napas lebih dari 30x/menit), saturasi oksigen pasien, atau distress pernapasan berat.

2.3.4.4 ARDS (*Acute Respiratory Distress Syndrome)*

Yakni onset baru atau gejala respirasi yang memburuk dalam seminggu sesudah diketahuinya kondisi klinis. Kondisi hipoksemia menentukan taraf berat ringannya ARDS.

2.3.4.5 Sepsis

Yakni sebuah kondisi respons disregulasi tubuh atas infeksi yang terbukti atau suspek infeksi dengan diikuti ketidakberfungsian sistem organ. Saturasi oksigen rendah, frekuensi napas cepat atau susah bernapas, dan perubahan status mental.

2.3.4.6 Syok septik

Kondisi syok septik ditandai dengan adanya hipotensi persisten sesudah resusitasi volum adekuat sehingga guna mempertahankan serum laktat > 2 mmol/L dan MAP ≥ 65 mmHg diperlukan vasopressor.

**2.3.5 Diagnosis**

Burhan *et al.,* (2020) menjelaskan bahwa diagnosis pada pasien dengan infeksi coronavirus meliputi:

2.3.5.1 Anamnesis

Burhan *et al.,* (2020) menjelaskan bahwa pada anamnesis umumnya menunjukkan tiga gejala pokok yakni sesak atau sulit bernapas, batuk kering, dan demam.

2.3.5.2 Pemeriksaan Fisik

Pemeriksaan fisik bisa dilakukan bergantung kepada berat ringannya manifestasi klinis (Burhan *et al.*, 2020).

1) Tingkat kesadaran

Hasil pengukuran tingkat kesadaran menunjukkan komposmentis hingga penurunan kesadaran

2) Tanda vital

Hasil pemeriksaan tanda vital umumnya terjadi suhu tubuh meningkat, tekanan darah menurun atau normal, frekuensi napas meningkat, dan frekuensi nadi meningkat. Saturasi oksigen bisa turun atau normal serta ditemukan adanya retraksi otot pernapasan.

3) Pemeriksaan fisik paru

Pemeriksaan fisik paru umumnya didapatkan ronki kasar, bronkial atau suara napas bronkovesikuler, redup pada daerah konsolidasi, fremitus raba mengeras, dan inspeksi tidak simetris statis dan dinamis.

2.3.5.3 Pemeriksaan Penunjang

Kepada semua pasien yang diduga terkena infeksi COVID-19, WHO memberi rekomendasi untuk melakukan pemeriksaan molekuler. Anjurannya dengan metode *Nucleic Acid Amplification Test (*NAAT)/deteksi molekuler semisal pemeriksaan RTPCR (Burhan *et al.*, 2020)

**2.3.6 Tatalaksana**

2.3.6.1 Farmakoterapi (medis)

Sampai sekarang, belum ditemukan obat yang spesifik namun hanya vaksin yang bisa mencegah covid-19. Pengobatannya sendiri sementara ini difokuskan sebagai terapi suportif dan simptomatis.

Beberapa obat atau diteliti lewat pengujian klinis, namun penggunaan vaksin telah mulai di berikan (Kementerian Kesehatan RI, 2021).

2.3.6.2 Deteksi dini dan pemilahan pasien

Pemilahan pasien dan deteksi dini yang berhubungan dengan infeksi covid-19 wajib dijalankan dari ketika pasien datang ke Rumah Sakit. Terkait dengan penangkapan kasus dan deteksi dini, triase berperan penting yakni sebagai titik awal atau garda terdepan yang bersentuhan dengan Rumah Sakit. Ketika pasien teridentifikasi untuk yang pertama kali, maka untuk kasus yang ringan pasien diisolasi di rumah sakit atau di rumah. Untuk kasus ringan berkemungkinan tidak buth perawatan di rumah sakit, akan tetapi pengecualian jika terjadi perburukan cepat. Seluruh pasien yang sudah dipulangkan apabila sakitnya memburuk atau memberat, diperintahkan untuk kembali lagi ke rumah sakit.

2.3.6.3 Isolasi pada semua kasus

Isolasi pada seluruh kasus dengan menyesuaikan gejala klinis yang timbul, baik sedang maupun ringan

2.3.6.4 Suplementasi oksigen

Pasien yang mengalami syok, hipoksemia, distress napas, atau SARI segera diberikan terapi oksigen. Perhatikan peralatan, penularan droplet, atau pencegahan infeksi saat mentataksanaan.

2.3.6.5 Observasi ketat

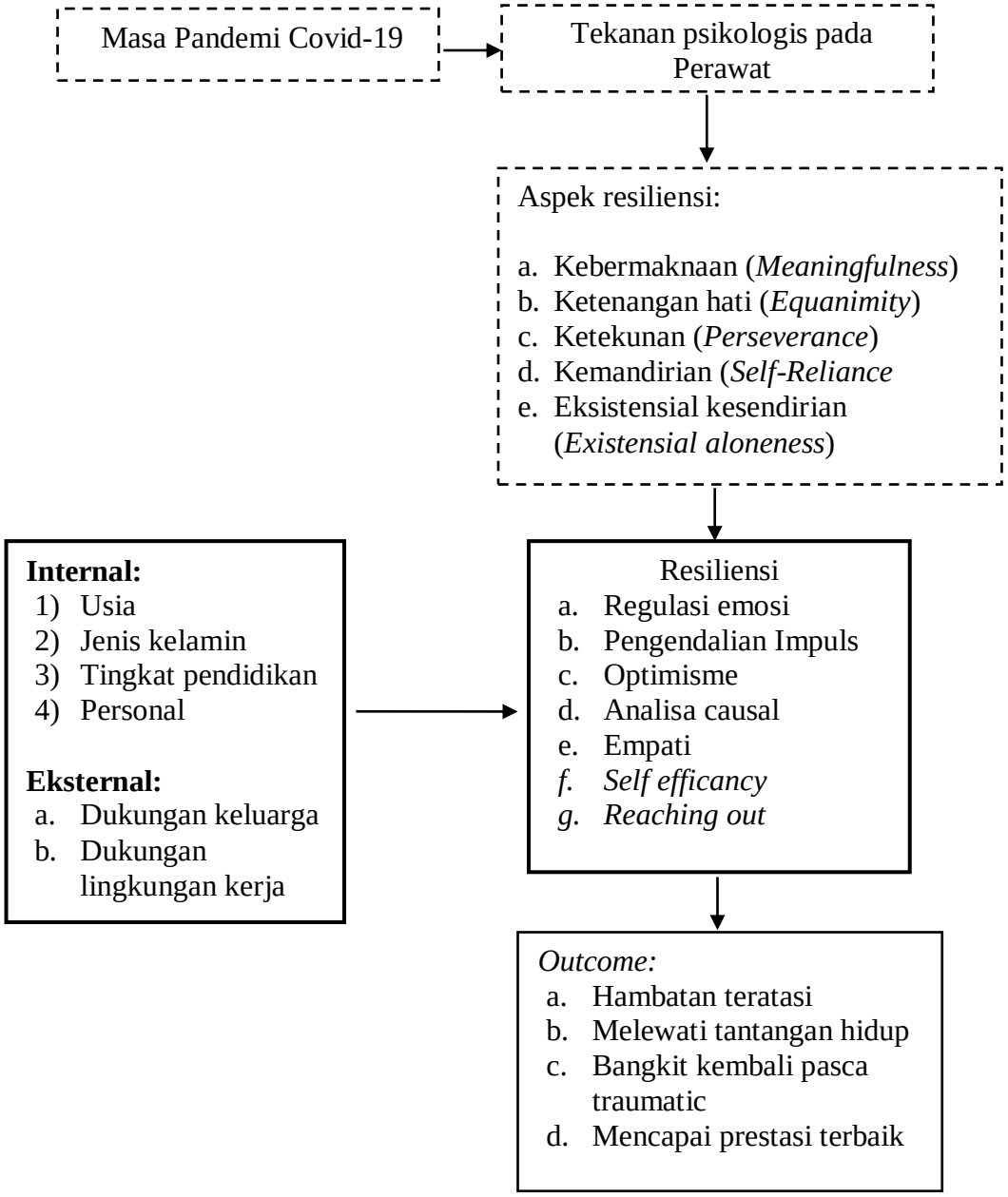
Perlu dilakukan observasi ketat terhadap kondisi pasien terkait sepsis, kegagalan respirasi progresif yang cepat, dan tanda-tanda

perburukan klinis, sehingga bisa dilakukan dengan cepat penanganan intervensi suportifnya.

### 2.3.7 Dampak Pandemi Covid Terhadap Tenaga Kesehatan

Muller (2014) menjelaskan bahwa pandemic global dapat menyebabkan efek yang cukup parah pada psikologis, terutama pada petugas kesehatan. Rasa takut terpapar atau terinfeksi menimbulkan kecemasan yang berlebihan, ketidakberdayaan, sehingga dapat berkembang menjadi masalah psikologis termasuk depresi, insomnia, gejala somatic, stress, dan bahkan bunuh diri. Gangguan psikologis yang muncul pada tenaga kesehatan baik berupa kecemasan, depresi maupun insomnia selama pandemic ini meningkat karena muncunya perasaan cemas terhadap kesehatan pada dirinya dan pada keluarganya. Didukung dengan tenaga kesehatan yang menjadi responden dalam penelitian ini, mereka merasa berisiko terpapar Covid-19 dan hal tersebut berdampak pada kinerja selama masa pandemic (Cotton, 2020).

## 2.4 Kerangka Konsep




Keterangan :

= Diteliti

= Tidak diteliti

Gambar 2.1 Kerangka Konseptual Faktor Yang Mempengaruhi Resiliensi Perawat Selama Masa Pandemi Covid-19

# BAB 3

# METODE PENELITIAN

## 3.1 Desain Penelitian

Disain penelitian adalah sebuah peta jalan bagi peneliti yang menuntun serta menentukan arah berlangsungnya proses penelitian secara benar dan tepat sesuai dengan tujuan yang telah ditetapkan, tanpa disaign yang benar peneliti tidak akan dapat melakukan penelitian dengan baik karena yang bersangkutan tidak mempunyai pedoman arah yang jelas (Arikunto,2010).

Penelitian ini menggunakan jenis penelitian literati study literatur. Study literatur adalah penelitian kepustakaan yaitu teknik pengumpulan data dengan melakukan penelaahan terhadap buku, literature, catatan, serta berbagai laporan yang berhubung dengan masalah (Sari and Asmendari, 2018). Penelitian ini menggunakan metode *Systematic Mapping Study (Scoping Study)* yaitu metode literature review yang sistematis dengan menggunakan tahapan-tahapan yang telah ditetapkan sebelumnya. Pemilihan pepper ini juga telah dilalukan secara subjektif oleh peneliti akan tetapi tetep menngunakan protokol filter yang telah ditetapkan diawal saat menentukan tujuan penelitian. Metode ini memiliki hasil berupa klaster dan kualifikasi dari temuan-temuan yang didapatkan dapa suatu topik penelitian.

## 3.2 Strategi Pencarian Literatur

### 3.2.1 Protokol dan Registrasi

Studi ini merupakan kajian literatur (*literature review, literature research*) atau penelitian kepustakaan (*library research*) yaitu serangkaian penelitian yang berkenaan dengan metode pengumpulan data pustaka, atau penelitian yang obyek penelitiannya digali melalui beragam informasi kepustakaan (buku, ensiklopedi, jurnal ilmiah, koran, majalah, dan dokumen). Studi ini berisi rangkuman menyeluruh dalam bentuk *literatur review* mengenai faktor yang mempengaruhi resiliensi perawat selama masa pandemi covid-19. Adapaun metode registrasi dalam pencarian literatur berupa *framework* yang digunakan, kata kunci, database atau *search engine*

### 3.2.2 Database Pencarian

*Literatur review* ini merupakan kajian dari beberapa hasil studi penelitian yang ditentukan berdasarkan tema penelitian. Tema utama pada penelitian ini adalah terkait dengan faktor yang mempengaruhi resiliensi perawat selama masa pandemi covid-19. Pencarian literatur dilakukan pada bulan Januari 2022. Data yang digunakan dalam penelitian ini adalah data sekunder yang diperoleh bukan dari pengamatan langsung, akan tetapi diperoleh dari hasil penelitian yang telah dilakukan oleh peneliti- peneliti terdahulu. Sumber data sekunder yang didapatkan berupa artikel dari jurnal ilmiah yang bereputasi baik sesuai dengan tema yang ditentukan. Pencarian literatur dalam *literatur*

*review* ini menggunakan database yaitu *google scholar, PubMed*, Portal Garuda, *Elsevier*.

### 3.2.3 Kata Kunci

Pencarian artikel atau jurnal menggunakan *keyword* dan *boolean operator* (dan, dan atau, *and, or, and not*) yang digunakan untuk memperluas atau menspesifikkan pencarian, sehingga mempermudah dalam penentuan artikel atau jurnal yang digunakan dan terdiri sebagai berikut:

1) Faktor yang mempengaruhi resiliensi perawat selama pandemic covid-19
2) Dan "resilensi" dan "resiliensi perawat" atau "resiliensi perawat selama covid-19"
3) And "*resilience during covid-19 pandemic*" and "*nurse resilience during covid-19 pandemic*" or "*health worker resilience during covid-19 pandemic*"
4) Or "*factor associated with resilience*" or "*factor associated with nurse resilience"* or "*factor associated with helath worker resilience" and* "*factor associated with helath worker resilience during pandemic"*

## 3.3 Kriteria Inklusi dan Eksklusi

### 3.3.1 Seleksi Studi dan Penilaian Kualitas

Setelah dilakukan penetapan topik *review* maka seluruh kata kunci dimasukkan dalam database yaitu *google scholar, PubMed*, Portal Garuda, *Elsevier* setelah itu dilakukan pembatasan pencarian dengan membatasi tahun yaitu artikel bertahun 2017-2021. Setelah mendapatkan artikel sesuai topik dilakukan identifikasi abstrak dan selanjutnya di telaah naskah lengkapnya (*fulltext*) selanjutnya dilakukan matrik sebagai bagian untuk melakukan analisis. Setelah dilakukan matrix dari artikel maka dilakukan sintesis berupa menyusun hasil matrix dalam bentuk narartif.

Strategi yang digunakan untuk mencari artikel menggunakan PEOS *framework* yaitu:

a. *Population/problem*

   Populasi atau masalah yang akan di analisis. Pada *literatur review* ini masalah yang diangkat atau menjadi topik utama adalah resiliensi. Dan populasi utama pada penelitian ini adalah perawat

b. *Exposure*

   Merupakan variabel yang diduga sebagai variabel penyebab atau variabel pajanan terhadap variabel out come. Pada *literatur review* ini variabel *exposure* adalah faktor- faktor yang mempengaruhi resilensi meliputi faktor interna dan faktor eksternal

c. *Outcome*

Hasil atau luaran yang diperolah pada penelitian. Pada *literatur review* ini artikel dengan hasil analisis adanya hubungan faktor internal dan eksternal terhadap resiliensi perawat selama pandemic covid-19 .

d. *Study design*

Desain penelitian yang digunakan oleh jurnal yang akan di *review*. Desain dari *literatur review* adalah seluruhnya berjenis kuantitatif.

Adapun format PEOS dalam *literatur review* ini diuraikan bedasarkan tabel sebagai berikut:

Tabel 3.1 Tabel PEOS

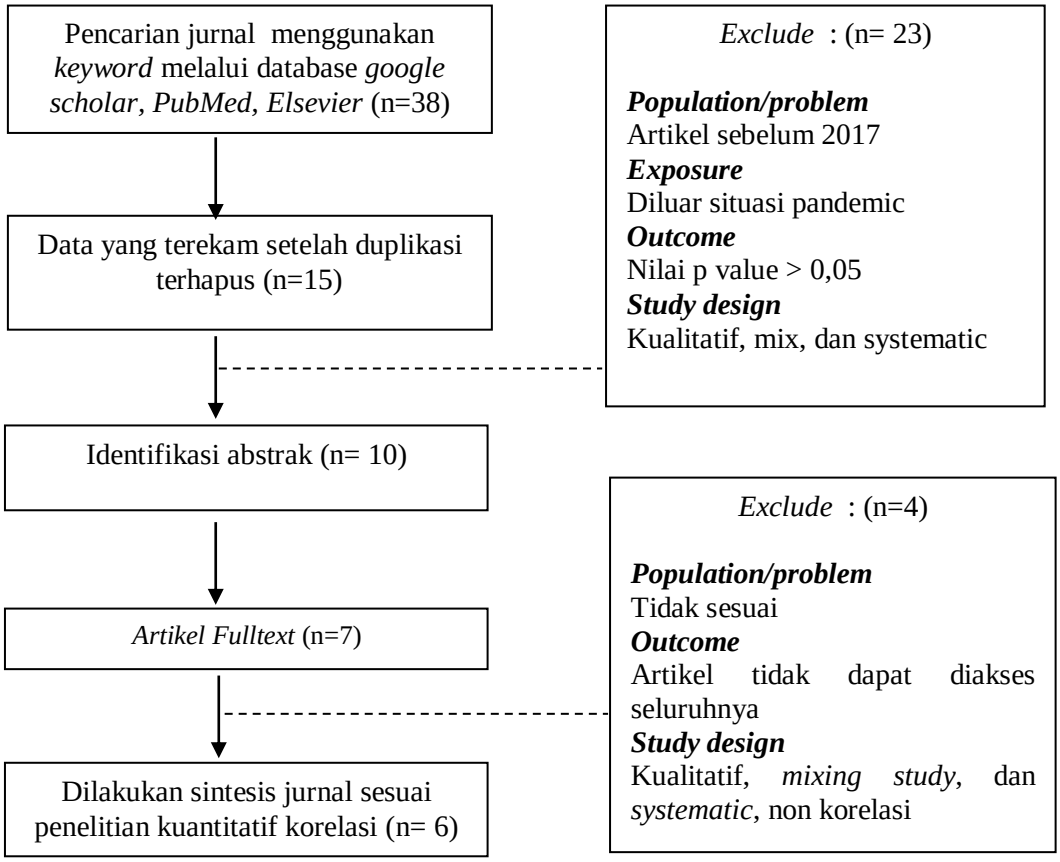
| Kriteria | Inklusi | Eksklusi |
|---|---|---|
| *Population/ Problem* | Artikel yang berkaitan dengan topik penelitian yaitu perawat; resiliensi pada perawat(1) | - |
| *Exposure* | Artikel yang berkaitan dengan faktor internal: Usia, Jenis kelamin, Tingkat pendidikan, Personal dan faktor eksternal: Dukungan keluarga, Dukungan lingkungan kerja(2) | - |
| *Outcome* | Adanya/tidak adanya hubungan faktor internal dengan resiliensi perawat selama pandemic; adanya hubungan faktor eskternal dengan resiliensi perawat selama masa pandemi (3) | - |
| *Study design* | Desain dengan *pendekatan Korelatif: crossectional, retrospektif* (4) | - |
| *Publication years* | 2018-2021 | - |

(1)Kriteria inklusi 1;(2)Kriteria inklusi 2;(3)Kriteria inklusi 3;(4)Kriteria inklusi 4

### 3.3.2 Hasil Pencarian dan Seleksi Studi

Berdasarkan hasil pencarian literatur melalui publikasi dalam database dan menggunakan katakunci sesuai dengan *boolean operator* didapatkan melalui database *google scholar* sebanyak 98 artikel berdasarkan identifikasi awal hanya terdapat 8 artikel yang relevan dengan tema. Melalui *PubMed* sebanyak 331 artikel dan berdasarkan identifikasi awal didapatkan 20 Artikel yang relevan. Melalui *Elsevier* sebanyak sebanyak 77 artikel berdasarkan identifikasi awal hanya terdapat 10 artikel yang relevan dengan tema. Berasarkan identifikasi abstrak pada hasil pencarian artikel melalui database *google scholar, PubMed, Elsevier,* diperoleh sebanyak 38 artikel

Hasil seleksi artikel studi dapat digambarkan dalam diagram *flow* dibawah ini:




Gambar 3.1 Diagram *Flow* Penelitian *Literature Review* Faktor Yang Mempengaruhi Resiliensi Perawat Selama Masa Pandemi Covid-19

# BAB 4

# HASIL DAN ANALISIS

Bab ini menguraikan tentang hasil dan analisis penelitian. Hasil diuraikan secara berurutan dengan memaparkan karakteristik artikel yang menjadi sumber emperis utama juga temuan sesuai dengan tujuan penelitian.

## 4.1 Hasil Seleksi Studi Berdasarkan Karakteristik Artikel

Hasil karakteristik artikel menguraikan temuan yang dimulai dari karakteristik sumber emperis utama berupa tahun publikasi, jenis publikasi, dan Bahasa yang digunakan. Selanjutnya diuraikan mengenai karakteristik responden dalam sumber emperis utama yang meliputi jenis kelamin, lama kerja, status marital, usia, status bekerja dan pendidikan. Adapun hasilnya adalah sebagai berikut:

### 4.1.1 Tahun Publikasi

Tabel 4.1 Karakteristik Artikel Hasil Penyeleksian Studi Berdasarkan Tahun Publikasi (n=6)

| Kategori | n | % |
|---|---|---|
| Tahun 2020 | 1 | 16,67 |
| Tahun 2021 | 5 | 83,33 |
| Total | 6 | 100 |

Tabel 4.1 menunjukkan pada *literature review* sebanyak satu artikel (16,67%) merupakan artikel ilmiah terpublikasi pada tahun 2020. Sedangkan, lima artikel ilmiah (83,33%) merupakan artikel terpublikasi pada tahun 2022

### 4.1.2 Jenis Publikasi

Tabel 4.2 Karakteristik Artikel Hasil Penyeleksian Studi Berdasarkan Jenis Publikasi (n=6)

| Kategori | n | % |
|---|---|---|
| Internasional | 4 | 66,67 |
| Lokal/Nasional | 2 | 33,33 |
| Total | 6 | 100 |

Tabel 4.2 menunjukkan bahwa pada *literature review* ini sebanyak empat artikel (66,67%) merupakan artikel ilmiah internasional. Sedangkan, dua artikel (33,33%) merupakan artikel ilmiah lokal/nasional.

### 4.1.3 Jenis Bahasa yang Digunakan

Tabel 4.3 Karakteristik Artikel Hasil Penyeleksian Studi Berdasarkan Bahasa yang Digunakan (n=6)

| Kategori | n | % |
|---|---|---|
| Indonesia | 2 | 33,33 |
| Inggris | 4 | 66,67 |
| Total | 6 | 100 |

Tabel 4.3 menunjukkan bahwa pada *literature review* ini sebanyak dua artikel (33,33%) merupakan artikel ilmiah berbahasa Indonesia. Sedangkan, empar artikel (66,67%) merupakan artikel ilmiah berbahasa Inggris

### 4.1.4 Karakteristik Jenis Kelamin

Tabel 4.4 Karakteristik Berdasarkan Jenis Kelamin Yang Termuat dalam Artikel Ilmiah (n=6)

| Sumber Emperis Utama | Frekuensi | % |
|---|---|---|
| **Zaini, (2021)** | | |
| Laki-laki | 70 | 59,8 |
| Perempuan | 47 | 40,2 |
| **Stevani, (2021)** | | |
| Laki-laki | 36 | 72 |
| Perempuan | 14 | 28 |
| **Afshari & Daradad, (2021)** | | |
| Laki-laki | 236 | 61 |
| Perempuan | 151 | 39 |
| **Xiauli et al., (2021)** | | |
| Laki-laki | 7 | 7,6 |

| | | |
|---|---|---|
| Perempuan | 86 | 92,4 |
| **Maiorano & Vagni, (2020)** | | |
| Laki-laki | 141 | 58,8 |
| Perempuan | 99 | 41,3 |
| **Castro et al., (2021)** | | |
| Laki-laki | 8 | 7,9 |
| Perempuan | 92,07 | 92,07 |

Tabel 4.4 menunjukkan bahwa pada *literature review* ini sebanyak empat artikel menyatakan bahwa sebagian besar responden berjenis kelamin laki-laki, sebagaimana diungkapkan oleh Zaini (2021) bahwa proporsi perawat laki- laki sebanyak 59,8%. Stevani, (2021) mengungkapkan perawat laki-laki sebanyak 72%. Afshari & Daradad, (2021) mengungkapkan perawat laki- laki sebanyak 61% dan Maiorano & Vagni (2020) juga mengunhkapkan bahwa perawat laki- laki sebanyak 58,8%. Sedangkan, dua artikel mengungkapkan dominasi perawat perempuan pada studinya sebagaimana diungkap oleh Xiauli et al., (2021) bahwa perawat perempuan sebanyak 92,4% dan Castro *et al.*, (2021) mengungkapan bahwa perawat perempuan sebanyak 92,07%.

### 4.1.5 Karakteristik Lama Kerja Sebagai Perawat

Tabel 4.5 Karakteristik Berdasarkan Lama Kerja Sebagai Perawat Yang Termuat dalam Artikel Ilmiah (n=6)

| Sumber Emperis Utama | Frekuensi | % |
|---|---|---|
| **Zaini, (2021)** | | |
| <1 tahun | 29 | 24,7 |
| >1 tahun | 88 | 75,21 |
| **Stevani, (2021)** | n/a | n/a |
| **Afshari & Daradad, (2021)** | 8,31 ±3,74 | |
| **Xiauli et al., (2021)** | | |
| <3 tahun | 13 | 14,1 |
| 3-5 tahun | 21 | 22,8 |
| 5-10 | 31 | 33,7 |
| >10 | 27 | 29,7 |
| **Maiorano & Vagni, (2020)** | n/a | n/a |
| **Castro et al., (2021)** | n/a | n/a |

Tabel 4.5 menunjukkan bahwa pada *literature review* ini dari enam artikel hanya tiga artikel ilmiah yang memuat tentang lama kerja sebagai perawat, ketiga artikel tersebut seluruhnya menyatakan bahwa sebagian besar perawat telah bekerja lebih dari 5 tahun. Sebagaimana dingkapkan oleh Zaini (2021) bahwa sebagian besar perawat telah bekerja lebih dari 1 tahun (75,21%). Afshari & Daradad, (2021) mengungkapkan bahwa rata-rata perawat telah bekerja selama 8,31 ±3,74 tahun. Dan Xiauli et al., (2021) sebagian besar perawat telah bekerja selama 5-10 tahun (33,7%).

### 4.1.6 Karakteristik Status Marital

Tabel 4.6 Karakteristik Berdasarkan Status Marital Yang Termuat dalam Artikel Ilmiah (n=6)

| Sumber Emperis Utama | Frekuensi | % |
|---|---|---|
| **Zaini, (2021)** | n/a | n/a |
| **Stevani, (2021)** | n/a | n/a |
| **Afshari & Daradad, (2021)** | | |
| Belum menikah(single) | 199 | 51,4 |
| Menikah | 188 | 48,6 |
| **Xiauli et al., (2021)** | | |
| Belum menikah(single) | 47 | 51,1 |
| Menikah | 42 | 45,7 |
| Cerai | 3 | 3,3 |
| **Maiorano & Vagni, (2020)** | n/a | n/a |
| **Castro et al., (2021)** | n/a | n/a |

Tabel 4.6 menunjukkan bahwa dari enam artikel hanya dua artikel ilmiah yang memuat tentang status marital, dua artikel tersebut seluruhnya menyatakan bhwa senagian besar perawat berstatus belum menikah (*single*) sebagaimana diungkap oleh Afshari & Daradad, (2021) bahwa perwat yang berstatus belum menikah sebanyak 51,4% dan Xiauli et al., (2021) mengungkapkan bahwa perawat yang berstatus belum menikah sebanyak 51,1%

4.1.7 Karakteristik Usia

Tabel 4.7 Karakteristik Berdasarkan Usia Yang Termuat dalam Artikel Ilmiah (n=6)

| Sumber Emperis Utama | Kategori usia (tahun) |
|---|---|
| **Zaini, (2021)** | 30,62 (SD=7,94; 19-53) |
| **Stevani, (2021)** | n/a |
| **Afshari & Daradad, (2021)** | 34,42 ± 6,37 (23-57) |
| **Xiauli et al., (2021)** | 30,48 ± 8,35 |
| **Maiorano & Vagni, (2020)** | 43,18 (SD=11,05; 22-67) |
| **Castro et al., (2021)** | 41,27 ± 10,03 |

Tabel 4.7 menunjukkan bahwa pada *literature review* ini dari enam artikel ilmiah hanya lima artikel ilmiah yang memuat usia responden dan menyatakan bahwa sebagian besar perawat berada pada rentang usia dewasa pertengahan. sebagaimana diungkapkan oleh Zaini (2021) bahwa usia rata- rata perawat adalah 30,62 dengan usia termuda 19 dan paling tua berusia 53 tahun. Afshari & Daradad, (2021) juga mengungkapkan bahwa rata- rata usia perawat yang bertugas adalah 34,42 dengan usia perawat termuda adalah 23 tahun dan paling tua adalah 57 tahun. Xiauli et al., (2021) mengungkapkan bahwa rata-rata perawat berusia 30,48 tahun. Maiorano & Vagni (2020) juga mengungkapkan bahwa rata- rata perawat berusia 43,18 tahun dengan usia termuda adalah 22 tahun dan paling tua berusia 67 tahun. Castro *et al.*, (2021) juga mengungkapkan bahwa mayoritas perawat berusia 41,27 tahun

4.1.8 Karakteristik Status Bekerja (Kepegawaian)

Tabel 4.8 Karakteristik Berdasarkan Status Bekerja Yang Termuat dalam Artikel Ilmiah (n=6)

| Sumber Emperis Utama | Frekuensi | % |
|---|---|---|
| **Zaini, (2021)** | | |
| Tidak tetap | - | - |
| Kontrak | 47 | 40,2 |
| Tetap | 70 | 59,8 |
| **Stevani, (2021)** | n/a | n/a |

| | | |
|---|---|---|
| Tidak tetap | | |
| Kontrak | | |
| Tetap | | |
| **Afshari & Daradad, (2021)** | | |
| Tidak tetap | 47 | 12,1 |
| Kontrak | 198 | 51,2 |
| Tetap | 142 | 36,7 |
| **Xiauli et al., (2021)** | | |
| Tidak tetap | 17,4 | 17,4 |
| Kontrak | 48 | 52,2 |
| Tetap | 28 | 30,43 |
| **Maiorano & Vagni, (2020)** | n/a | n/a |
| Tidak tetap | | |
| Kontrak | | |
| Tetap | | |
| **Castro et al., (2021)** | | |
| Tidak tetap | 21 | 20,79 |
| Kontrak | 40 | 39,6 |
| Tetap | 40 | 39,6 |

Tabel 4.8 menunjukkan bahwa pada *literature review* dari enam artikel ilmiah terdapat empat artikel ilmiah yang memuat status bekerja (kepegawaian) dari responden, tiga diantaranya mengungkapkan bahwa mayoritas perawat yang bertugas berstatus kontrak sebagaimana diungkap oleh Afshari & Daradad, (2021) mengungkapkan bahwa sebagian besar merupakan perawat yang berstatus kontrak yaitu sebanyaik 51,2%. Xiauli et al., (2021) mengungkapkan bahwa mayoritas perawat berstatus karyawan kontrak sebanyak 52,2% dan Castro *et al.*, (2021) mengungkapkan bahwa sebagian besar adalah perawat kontrak yang mencapai 39,6%. Dan satu artikel oleh Zaini (2021) yang mengungkapkan bahwa sebagian besar berstatus karyawan tetap yaitu sebanyak 59,8%.

4.1.9 Karakteristik Tingkat Pendidikan

Tabel 4.9 Karakteristik Berdasarkan Usia Yang Termuat dalam Artikel Ilmiah (n=6)

| Sumber Emperis Utama | Frekuensi | % |
|---|---|---|
| **Zaini, (2021)** | n/a | n/a |
| Diploma (*vocation*) | | |
| Sarjana (*Bachelor*) | | |
| Magister (*Master*) | | |
| **Stevani, (2021)** | n/a | n/a |
| Diploma (*vocation*) | | |
| Sarjana (*Bachelor*) | | |
| Magister (*Master*) | | |
| **Afshari & Daradad, (2021)** | | |
| Diploma (*vocation*) | 47 | 12,1 |
| Sarjana (*Bachelor*) | 198 | 51,2 |
| Magister (*Master*) | 142 | 36,7 |
| **Xiauli et al., (2021)** | | |
| Diploma (*vocation*) | 19 | 20,7 |
| Sarjana (*Bachelor*) | 71 | 77,2 |
| Magister (*Master*) | 2,2 | 2,2 |
| **Maiorano & Vagni, (2020)** | n/a | n/a |
| Diploma (*vocation*) | | |
| Sarjana (*Bachelor*) | | |
| Magister (*Master*) | | |
| **Castro et al., (2021)** | n/a | n/a |
| Diploma (*vocation*) | | |
| Sarjana (*Bachelor*) | | |
| Magister (*Master*) | | |

Tabel 4.9 menunjukkan bahwa pada *literature review* dari enam artikel ilmiah hanya dua artikel yang memuat tingkat pendidikan perawat. Kedua artikel mengungkapkan bahwa sebagian besar perawat yang bertugas dimasa pandemic merupakan perawat dengan pendidikan sarjana (*bachelor*). Sebagaimana diungkapkan oleh Afshari & Daradad, (2021) bahwa perawat lulusan sarjana (*bachelor*) sebanyak 51,2% dan Xiauli et al., (2021) mengungkapkan bahwa perawat lulusan sarjana (*bachelor*) sebanyak 77,2%.

## 4.2 Hasil Analisis Utama

Bagian ini memuat hasil temuan utama yang berdasarkan tujuan khusus penelitian. Hasil analisis diuraikan secara berurutan mulai dari tingkat resiliensi perawat selama masa pandemic, faktor internal dan faktor eksternal yang memengaruhi resiliensi perawat selama masa pandemic. Adapun hasilnya adalah sebagai berikut:

### 4.2.1 Hasil Analisis Artikel Tentang Resiliensi Perawat Selama Masa Pandemi Covid-19

Tabel 4.10 Hasil Analisis Analisis Artikel Tentang Resiliensi Perawat Selama Masa Pandemi Covid-19

| Sumber Emperis Utama | Hasil | Interpretasi tingkat resiliensi |
|---|---|---|
| Zaini, (2021) | Nilai median 32 (SD=4,85; 23-40) 60% responden memiliki ketahanan psikologis cukup | Cukup |
| Stevani, (2021) | Nilai median 124 (SD=16; 74-134), kategori resiliensi tinggi | Tinggi |
| Afshari & Daradad, (2021) | Berdasarkan *Connor–Davidson Resilience Scale* (CD-RISCH) nilai mean sebesar 60 dan sebanyak 12% memiliki nilai >80 yang termasuk dalam kategori tinggi, dan sisanya sebagian besar dalam ketegori cukup (88%) | Cukup |
| Xiauli et al., (2021) | Berdasarkan *Connor–Davidson Resilience Scale* (CD-RISCH) nilai mean sebesar 87,04±22,78 (25-125) menunjukkan tingkat resilensi yang tinggi. Berdasarkan dimensi resilensi diketahui dimensi keuletan (*tenacy*) sebesar 43.97 ± 12.43. kekuatan (*streght*) sebesar 29,65±7,32, optimisme (*optimism*) sebesar 13,42±3,92 | Tinggi |
| Maiorano & Vagni, (2020) | Berdasarkan pengukuran menggunakan *dispositional resilience scale*-15 diketahui bahwa nilai 27,79 (SD=4,42) yang menunjukkan resilensi tinggi | Tinggi |
| Castro et al., (2021) | Nilai skor rata rata resiliensi sebesar 27,94±5,84; dimana pada perawat perempuan menunjukkan skor rata- rata | Cukup |

| | |
|---|---|
| | 28,07±5,93, sedangkan pada laki laki sebesar 26,37±4,65 yang menunjukkan tingkat resilensi yang cukup |

Tabel 4.10 menunjukkan bahwa sebagian besar resiliensi perawat selama masa pandemic covid-19 berada pada kategori cukup hingga tinggi. *Literatur review* ini menemukan bahwa sebanyak tiga artikel memuat bahwa resilensi perawat dalam kategori cukup sebagai mana diungkapkan oleh Zaini, (2021) bahwa sebanyak 60% responden memiliki resiliensi yang cukup dengan skor resiliensi sebesar 32 (SD=4,85; 23-40). Afshari & Daradad, (2021) mengungkapkan bahwa sebanyak 88% perawat memiliki tingkat resiliensi cukup dan 12% memiliki resiliensi tinggi dengan nilai rata- rata *Connor–Davidson Resilience Scale* (CD-RISCH) sebesar 60. Castro *et al.,* (2021) mengungkapkan bahwa sebagian besar tingkat resiliensi perawat selama masa pandemic covid-19 adalah cukup dimana pada perawat perempuan menunjukkan skor rata- rata 28,07±5,93, sedangkan pada laki laki sebesar 26,37±4,65.

Tiga artikel ilmiah lainya mengungkapkan bahwa resiliensi perawat sebagian besar berada pada kategori yang tinggi sebagaimana diungkapkan oleh Stevani, (2021) bahwa sebagian besar perawat memiliki skor resiliensi tinggi yaitu sebesar 124 (SD=16;74-134). Xiauli *et al.,* (2021) juga mengungkapkan tingkat resiliensi yang tinggi pada perawat dengan rerata skor resiliensi sebesar 87,04±22,78 (*range*: 25-125) dimana aspek keuletan (*tenacy*) merupakan dimensi tertinggi dengan nilai sebesar 43.97 ± 12.43. Maiorano & Vagni, (2020) mengungkapkan bahwa berdasarkan *dispositional resilience*

*scale*-15 tingkat resiliensi pada perawat berada pada kategori yang tinggi dengan nilai skor resiliensi rerata sebesar 27,79 (SD=4,42)

### 4.2.2 Hasil Analisis Faktor Internal Yang Mempengaruhi Resiliensi Perawat Selama Masa Pandemi Covid-19

Tabel 4.11 Hasil Analisis Artikel Tentang Resiliensi Perawat Selama Masa Pandemi Covid-19

| Sumber Emperis Utama | Hasil | Nilai statistic |
|---|---|---|
| Zaini, (2021) | Usia (30,62±7,94) | *p-value: 0,07* |
| Stevani, (2021) | Terdapat hubungan positif yang signifikan antara *self esteem* dan resiliensi pada perawat dengan pengaruh sebesar 87% | *R Square: 0,871*<br>*r=0,934*<br>*p-value:0,000* |
| Afshari & Daradad, (2021) | a. Jenis kelamin: laki-laki 62.36 (14.46)<br>b. Usia 37-44 nilai skor 63,22 (SD: 13,24) | *a. p-value:0,03*<br>*b. p-value:0,004* |
| Xiauli et al., (2021) | Sensitifitas interpersonal (*Interpersonal sensitivity*). Nilai skor 12,54±4,00 (16,30%) dalam kategori baik. Semakin tinggi tingkat sensitifitas interpersonal maka semakin tinggi nilai skor resiliensinya | *p-value:0,030* |
| Maiorano & Vagni, (2020) | a. Jenis kelamin: Laki-laki>perempuan<br>b. Pengalaman traumatic; resiliensi lebih tinggi didapatkan pada perawat yang tidak memiliki trauma masa lalu dengan pengaruh sebesar 0,351 (35,1%) | *a. p-value:0,001*<br>*b. p-value:0,001* |
| Castro et al., (2021) | Jenis kelamin; resiliensi tertinggi pada perempuan =28,07±5,93, | *p-value:0,001* |

Tabel 4.11 menunjukkan bahwa pada *literatur review* ini sebanyak enam artikel memuat faktor internal yang berkaitan dengan resiliensi pada perawat selama masa pandemic covid-19. Zaini, (2021) menemukan bahwa usia dewasa berkaitan dengan resilensi (*p-value: 0,07*). Stevani, (2021) mengungkapkan bahwa *self esteem* yang baik berkaitan secara positif dengan resiliensi (*r=0,934*; *p-value:0,000*). Afshari & Daradad, (2021) menemukan bahwa jenis kelamin (*p-value:0,03*) dan usia berkaitan dengan resiliensi (*p-*

*value:0,004*). Xiauli et al., (2021) menemukan bahwa sensitifitas interpersonal (*Interpersonal sensitivity*) berkaitan dengan resiliensi (*p-value:0,030*). Maiorano & Vagni, (2020) menemukan bahwa jenis kelamin (*p-value:0,001*) dan pengalaman traumatic berkaitan erat dengan resiliensi (*p-value:0,001*). Castro et al., (2021) menemukan bahwa jenis kelamin berkaitan dengan resiliensi (*p-value:0,001*)

### 4.2.3 Hasil Analisis Faktor Eksternal Yang Mempengaruhi Resiliensi Perawat Selama Masa Pandemi Covid-19

Tabel 4.12 Hasil Analisis Analisis Artikel Tentang Resiliensi Perawat Selama Masa Pandemi Covid-19

| **Sumber Emperis Utama** | **Hasil** | **Nilai statistic** |
|---|---|---|
| Zaini, (2021) | Lama kerja: >1 tahun | *p-value: 0,09* |
| Stevani, (2021) | n/a | n/a |
| Afshari & Daradad, (2021) | a. Pendidikan *Bachelor degree* 61.67 (15.3)<br>b. Lama kerja (*work experience*) 15–20 67.73 (13.4) | *a. p-value:0,044*<br>*b. p-value:0,030* |
| Xiauli et al., (2021) | n/a | n/a |
| Maiorano & Vagni, (2020) | Tingkat emergensi stress; Nilai resilensi menunjukkan penurunan seiring dengan bertembahnya skor *emergency stress* sebesar -0,344 | *p-value:0,001* |
| Castro et al., (2021) | Status pekerjaan; Nilai skor rsielensi tetinggi pada staf perawat dengan status tetap= 48,93 ± 8,24 | *p-value:0,001* |

Tabel 4.12 menunjukkan bahwa dari enam artikel ilmiah teridentifikasi empar artikel ilmiah memuat faktor eksternal yang berhubungan dengan resiliensi pada perawat selama pandemic covid-19. Zaini, (2021) menemukan lama kerja berkaitan dengan resiliensi (*p-value: 0,09*). Afshari & Daradad, (2021) mengungkapkan adanya dua faktor eksternal yang berkaitan dengan resiliensi perawat yaitu pendidikan (*p-value:0,044*) dan lama kerja *work*

*experience (p-value:0,030*). Maiorano & Vagni, (2020) mengungkapkan bahwa emergensi stress berkaitan erat dengan resiliensi perawat (*p-value:0,001*). Castro et al., (2021) mengungkapkan bahwa status pekerjaan berkaitan erat dengan resiliensi pada perawat (*p-value:0,001*)

# BAB 5

# PEMBAHASAN

Bab ini membahas mengenai interpretasi hasil penelitian yang disajikan secara berurutan berdasarkan tujuan dengan merujuk pada hasil *review*, konsep teori, dan opini dengan membandingkan kajian terdahulu serta menyampaikan keterbatasan.

## 5.1 Interpretasi Hasil *Review*

### 5.1.1 Resiliensi Perawat Selama Masa Pandemi Covid-19

Berdasarkan enam artikel diketahui bahwa resiliensi perawat selama masa pandemic covid-19 berada pada rentang kategori cukup hingga tinggi. Tiga studi oleh Zaini (2021), Afshari & Daradad (2021) dan Castro *et al.*, (2021) menyatakan bahwa sebagian besar resiliensi perawat berada pada kategori cukup. Sedangkan tiga studi lainya oleh Stevani (2021), Xiauli *et al.*, (2021) dan Maiorano & Vagni (2020) menyatakan bahwa sebagian besar resiliensi perawat berada pada kategori tinggi.

Menurut Munawaroh & Mashudi (2019) resiliensi dipandang sebagai kemampuan hidup manusia dalam merespon dengan cara yang sehat dan produktif ketika berhadapan dengan kesulitan maupun trauma, hal tersebut merupakan sesuatu yang sangat penting untuk mengendalikan tekanan hidup sehari-hari. Resiliensi merupakan cara berfikir yang memungkinkan individu mampu untuk mencari berbagai pengalaman serta memandang bahwa hidupnya sebagai suatu kegiatan yang sedang berjalan. Lebih jauh lagi Smith & Ascough (2016) menjelaskan bahwa resiliensi berfungsi

sebagai dasar bagi manusia dalam mengatasi hambatan-hambatan pada masa kecil, melewati tantangan-tantangan dalam kehidupan sehari-hari, bangkit kembali setelah mengalami kejadian traumatik atau kesulitan besar, mencapai prestasi terbaik yang dipengaruhi oleh usia, gender, peronal, dan dukungan.

Temuan ini menunjukkan bahwa resiliensi yang tinggi merupakan atribut dari psikologi positif dan merupakan indikator penting dari kesehatan mental yang positif. resiliensi yang tinggi memungkinkan individu untuk mengatasi situasi dan tekanan yang merugikan dengan mendorong penerimaan diri, tanggung jawab diri, dan pemeliharaan diri. Sejalan dengan hasil ini studi oleh Wu & Sang (2020) mengungkapkan bahwa hubungan timbal balik yang signifikan antara resiliensi dengan status kesehatan mental yang menunjukkan bahwa resiliensi memprediksi tingkat status kesehatan mental pada individu.

*Review* ini memberikan dasar perspektif bahwa pengaruh resiliensi terhadap status psikologi pada perawat memiliki efek berantai yaitu resiliensi lebih jauh mempengaruhi status psikologis dan status psikologis yang baik akan meningkatkan ketahanan individu secara positif dalam menghadapi pandemic. Studi ini menunjukan adanya dominiasi usia dewasa pertengahan hal ini memberikan asumsi bahwa seiring bertambahnya usia maka akan berimplikasi terhadap persepsi positif setiap individu akan berbagai hal dengan mengenali dan menerapkan kepositifan; merasakan dan menghargai pengalaman positif, melatih, dan membentuk pemikiran positif;

dan membangun dan memelihara interpersonal yang positif dengan berbagai keadaan.

5.1.2 Faktor Internal Yang Mempengaruhi Resiliensi Perawat Selama Masa Pandemi Covid-19

Berdasarkan enam artikel diketahui bahwa faktor internal yang memengaruhi resiliensi perawat selama masa pandemic covid-19 diantaranya yaitu usia, jenis kelamin, *self estem*, sensitifitas interpersonal (*interpersonal sensitivity*) dan pengalaman traumatic.

Berdasarkan usia diketahui bahwa sebagian besar perawat berada pada rentang usia dewasa pertengahan dengan rerata berusia tiga puluh tahun. Zaini (2021) dan Afshari & Daradad, (2021) menunjukkan korelasi bermakna antara usia dengan resiliensi pada perawat. Konsiten dengan studi oleh Panzeri et al., (2021) bahwa usia memengaruhi resiliensi individu. Menurut MacLeod et al.,(2016) bahwa resiliensi yang tinggi ditemukan pada mereka dengan usia diatas 30 tahun

Berdasarkan jenis kelamin diketahui bahwa sebagian besar perawat berjenis kelamin laki- laki. Menurut Afshari & Daradad, (2021) dan Maiorano & Vagni, (2020) jenis kelamin merupakan faktor yang berkaitan dengan tingkat resiliensi pada perawat dan studi tersebut juga mengungkapkan bahwa resiliensi pada perawat laki- laki lebih tinggi dibandingkan dengan perawat perempuan. Hasil studi ini juga sejalan dengan penelitian oleh Xiao *et al* (2020) bahwa efek resiliensi yang tinggi lebih cenderung ditemukan pada pria dibandingkan dengan wanita. Studi tersebut juga menemukan bahwa pada pria cenderung memiliki resiliensi

yang tinggi sehingga hal tersebut mampu memediasi efek psikologis dan dapat bertahan selama masa pandemi covid-19 dan cukup berbeda dengan perempuan dimana memiliki kecenderungan memiliki resiliensi yang rendah sehingga secara psikologis memiliki kerentanan yang lebih lemah dibandingkan laki- laki.

Menurut Stevani, (2021) *self esteem* pada perawat juga berpengaruh terhadap resiliensi. Hal ini menunjukkan bahwa *self esteem* yang positif akan meningkatkan resiliensi individu. Konsisten dengan temuan ini, studi oleh Qiaolan (2021) menunjukkan bahwa *self esteem* berpengaruh positif terhadap resiliensi. Menurut Liu & Wang, (2017) harga diri yang tinggi telah dianggap sebagai faktor pelindung untuk ketahanan, pada saat yang sama, ketahanan dipandang sebagai faktor pendorong untuk harga diri.

Xiauli et al., (2021) mengemukakan bahwa sensitifitas interpersonal (*Interpersonal sensitivity*) berpengaruh secara independent sebagai faktor internal yang berkontribusi terhadap resiliensi perawat. Hal tersebut menunjukan bahwa semakin tinggi tingkat sensitifitas interpersonal seseorang maka semakin tinggi resiliensinya. Konsisten dengan temuan ini, studi oleh Nuran & Hilal (2017) menjelaskan bahwa sensitifitas interpersonal mampu meningkatkan meningkatkan resiliensi dan secara bersama sama berimplikasi terhadap *self-efficacy* yang membuat seseorang mampu untuk lebih tahan terhadap kejadian buruk.

Maiorano & Vagni (2020) mengungkapkan bahwa pengalaman traumatic masa lalu berpengaruh terhadap tingkat resiliensi individu. Resiliensi lebih tinggi didapatkan pada perawat yang tidak memiliki trauma

masa lalu. Secara konsisten, studi ini sejalan dengan Matheson, (2020) bahwa pengalaman traumatic masa lalu memunculkan kondisi patologi yang terfokus pada stresor atau individu (penilaian stres, strategi koping). Dalam beberapa kasus tercermin oleh rasa takut, sedangkan dalam kasus lain berimplikasi pada ketidakpastian tentang masa depan yang dapat mendorong kecemasan lanjutan.

Faktor internal pertama yang dapat memengaruhi resiliensi pada perawat selama masa pandemic covid-19 adalah usia yang telah memasuki dewasa pertengahan. Hal ini memberikan asumsi logis bahwasanya semakin dewasa usia individu maka semakin adaptive terhadap suatu kondisi atau suatu kejadian hal ini akan berdampak pada mekanisme adaptasi psikologis yang akan berimplikasi terhadap meningkatnya resiliensi pada individu. Hal ini juga memberikan suatu pandangan bahwa semakin tua usia seseorang maka pengalaman hidup akan semakin banyak, dengan banyaknya pengalaman hidup maka seseoang tersebut akan memiliki ketahanan psikologis yang semakin baik.

Faktor internal kedua yang dapat memengaruhi resiliensi pada perawat selama masa pandemic covid-19 adalah jenis kelamin yaitu perawat laki-laki memiliki nilai resiliensi yang lebih tinggi. Hal ini memberikan pandangan bahwa perbedaan gender dalam faktor resiliensi didasarkan pada sebuah asumsi bahwa pria dan wanita memiliki kepribadian yang berbeda utamanya adalah sifat yang mempengaruhi cara mereka mengatasi kesulitan. Pria cenderung kurang berkomunikasi selama kesulitan dan mereka akhirnya mendapatkan lebih sedikit bantuan dan empati dibandingkan

dengan wanita yang berkomunikasi lebih banyak dan menghasilkan empati dan jenis dukungan lainnya. Perempuan cenderung menggunakan perlindungan keluarga dan komunitas, sedangkan laki-laki lebih bergantung pada faktor pelindung individu atau dengan kekuatanya sendiri.

Faktor internal ketiga yang dapat memengaruhi resiliensi pada perawat selama masa pandemic covid-19 adalah *self esteem* yang positif. Hal ini menunjukkan bahwa *self esteem* sebagai faktor internal dalam meningkatkan resiliensi dimana resiliensi secara positif memengaruhi kepuasan hidup dan tekanan psikologis melalui efek mediasi harga diri. Hal ini memberikan padangan bahwa melalui self esteem yang positif akan membentuk koping yang positif. Melalui koping yang positif individu akan memiliki adaptasi yang baik dengan berfokus pada pengurangan frekuensi peristiwa kehidupan, rasa kehilangan. Sehingga dengan terbentuknya gaya koping positif maka akan membentuk resilensi yang baik.

Faktor internal kedua yang dapat memengaruhi resiliensi pada perawat selama masa pandemic covid-19 adalah sensitifitas interpersonal (*Interpersonal sensitivity*) yang baik. Hal ini memberikan asumsi bahwa orang dengan sensitivitas tinggi memiliki kecenderungan koping yang lebih besar terhadap gangguan psikologis karena suatu kondisi atau kejadian sehingga. Adanya sensitifitas mendorong kepercayaan orang pada kemampuan diri mereka.

Faktor internal kedua yang dapat memengaruhi resiliensi pada perawat selama masa pandemic covid-19 adalah ketiadaan pengalaman traumatik masa lalu. Hal ini memberikan suatu pandangan bahwa adanya pengalaman

traumatic pada masa lalu merupakan faktor psikososial yang membentuk komponen kognitif, perilaku dan eksistensial pada individu. Kehadiran pengalaman traumatis pada individu ini berjalan secara dinamis dari waktu ke waktu yang berimplikasi terhadap pandangan dalam hidup. Individu yang tumbuh dan berkembang tanpa adanya pengalaman traumatis akan memandang kehidupan secara optimis, hal ini akan memunculkan ketahanan psikologis atau resiliensi yang baik pada masing- masing individu.

5.1.3 Faktor Eksternal Yang Memengaruhi Resiliensi Perawat Selama Masa Pandemi Covid-19

Empat dari enam artikel mengungkapkan faktor eksternal yang memengaruhi resiliensi diantaranya yaitu lama kerja, tingkat pendidikan status pekerjaan (kepegawaian) dan tingkat stress *emergency*.

Studi ini mengungkapkan bahwa lama kerja memengaruhi resiliensi. Afshari & Daradad, (2021) dan Zaini, (2021) menjelaskan bahwa pengalaman kerja (*work experience*) yang lebih lama memberikan kontribusi positif dalam meningkatkan resiliensi perawat. Menurut teori *work and work environment* model dalam Fergusson, (2020) bahwa lama kerja merupakan bagian dari pemodelan *work related problem* yang berimplikasi pada proses pembelajaran individu sehingga berdampak pada resiliensinya. Konsisten dengan hasil studi ini, penelitian oleh Teo & Chay (2021) mengungkapkan bahwa lama kerja dikaitkan dengan resiliensi yang pada akhirnya akan meningkatkan motivasi pada individu untuk bertahan dalam situasi termasuk kondisi pademi.

Faktor eksterna selanjutnya adalah pendidikan. Afshari & Daradad, (2021) menjelaskan bahwa pendidikan berpengaruh terhadap resiliensi, ia menunjukkan bahwa pada perawat dengan status sarjana (*bachelor degree*) memiliki nilai resiliensi tertinggi dibandingkan dengan perawat vokasi maupun perawat master (magister).

Studi ini juga menujukkan bahwa tingkat *stress emergency* juga berkaitan dengan resiliensi pada perawat. Menurut Maiorano & Vagni, (2020) bahwa resiliensi akan mengalami penurunan dengan bertambahnya *emergency stress*. Menurut Morales, (2021) pandemic covid-19 merupakan kondisi *emergency* yang meningkatkan tingkat stress peada perawat utamanya pada prawat yang bekerja pada lini depan. Menurut Wu & Xiuyun, (2020) *stress emergency* berimplikasi terhadap strategi koping pada individu yang selanjutnya akan berimplikasi terhadap resiliensi. Sejalan dengan hal tersebut Chen & Chiang, (2018) menjelaskam bahwa koping mengacu pada strategi kognitif dan perilaku untuk menangani dan mengelola peristiwa stres atau hasil psikologis dan fisik yang negatif dan resiliensi mengacu pada kapasitas adaptif untuk pulih dari situasi stres dalam menghadapi kesulitan. Strategi koping memediasi hubungan antara resiliensi dan kesejahteraan psikologis.

Studi ini juga menemukan bahwa status pekerja perawat berkaitan dengan resiliensi. Castro et al., (2021) mengungkapkan bahwa perawat dengan status bekerja tetap memiliki resiliensi yang lebih tinggi dibandingkan dengan perawat yang bertatus kontrak. Konsisten dengan studi oleh Zhang, (2018) bahwa status pekerjaan perawat berkaitan dengan

resiliensi melalui jalur kepuasan kerja. Perawat dengan tingkat kepuasan tertinggi adalah mereka yang memiliki stabilitas pekerjaan lebih yaitu perawat dengan status tetap dibandingkan dengan perawat kontrak. Hal ini memberikan alasan logis bahwa prospek karier akan membentuk ketahanan psikologis pada diri seseorang

Hasil *review* ini memberikan pandangan bahwa factor eksternal pertama yang dapat memengaruhi resiliensi perawat selama pandemic covid-19 yaitu lama kerja, hal ini memberikan bukti logis bahwa lama kerja perawat memberikan kesempatan bagi perawat untuk mendapatkan pengalaman sehingga ia mampu dengan baik beradaptasi dengan kondisi. Melalui pengalaman kerja perawat akan terbiasa menghadapi peristiwa-peristiwa penting dalam asuhan sehingga ia mampu bertahan dalam kondisi apapun termasuk akan berdampak pada adaptasi psikologis yang berimplikasi pada meningkatnya resiliensi.

Factor eksternal kedua yang dapat memengaruhi resiliensi perawat selama pandemic covid-19 yaitu pendidikan, secara umum dalam keperawatan ada tiga klasifikasi pendidikan yaitu vokasi, sarjana dan pasca sarjana. Ini memberikan suatu pemahaman bahwa melalui pendidikan individu akan memiliki kapasitas kognitif yang baik sehingga mampu menerima informasi dengan baik. hal ini menjadi penting bahwa adanya pandemic ini memberikan berbagai macam informasi yang menyebar baik itu informasi yang sifatnya positif dan negative. Ini membangun suatu asumsi bahwa individu dengan tingkat pendidikan yang lebih tinggi akan mampu membedakan mana informasi yang baik dan mana informasi yang

buruk atau tidak benar sehingga hal tersebut dapat mereduksi dampak psikologis yang pada akhirnya akan membentuk resiliensi yang baik pada individu tersebut.

Factor eksternal ketiga yang dapat memengaruhi resiliensi perawat selama pandemic covid-19 yaitu kondisi *stress emergency* dimana factor ini memberikan dampak apabila semakin tinggi tingkat *stres emergency* akan berimplikasi terhadap menurunnya resiliensi hal ini secara logis dipengaruhi oleh factor mekanisme koping dalam menghadapi masalah yang terproyeksikan melalui strategi koping. Hal ini memberikan gambaran bahwa stress emergency terkait dengan meningkatnya beban kerja selama masa pandemic. Dengan meningkatnya beban kerja dan ketidakteraturan kerja mengakibatkan stress pada perawat yang secara langsung akan berimplikasi terhadap aspek psikologis. Dengan meningkatnya stress maka dampak traumatis akan meningkat, dengan meningkatnya aspek traumatism aka akan berdampak pada resiliensi individu.

Factor eksternal keempat yang dapat memengaruhi resiliensi perawat selama pandemic covid-19 yaitu adalah status pekerjaan dengan status tetap memungkinkan perawat memiliki kepuasan kerja yang baik sehingga memediasi untuk terbetuknya resiliensi yang tinggi pada perawat selama masa pandemic covid-19. Hal ini memberikan suatu pandangan bahwa status pekerjaa merupakan kondisi yang diharapkan. Dengan memiliki status pekerjan yang jelas dan tetap akan memungkinkan seseorang untuk termotivasi karena kesejahteraan hidup meningkat, dengan demikian ia akan termotivasi untuk bertahan dan mampu mempertahankan resiliensinya.

## 5.2 Keterbatasan Penelitian

5.2.1 Studi ini hanya terbatas pada hasil kajian literatur, dan tidak dilakukan metanalisis

5.2.2 Proporsi artikel yang memuat faktor yang direview tidak dalam posisi berimbang artinya tidak semua artikel memuat faktor – faktor tersebut secara jelas.

5.2.3 Jumlah artikel yang terpublikasi masih terbatas mengingat kondisi pandemic terjadi pada 2019 hingga 2022 dimana hal tersebut merupakan kasus baru sehingga berimplikasi pada jumlah publikasi ilmiah.

# BAB 6

# KESIMPULAN

## 6.1 Kesimpulan

6.1.1 *Literatur review* ini menunjukkan bahwa sebagian besar resiliensi perawat selama masa pandemic covid-19 berada pada rentang kategori cukup hingga tinggi

6.1.2 *Literatur review* ini mengungkapkan bahwa faktor faktor internal yang memengaruhi resiliensi perawat selama masa pandemic covid-19 diantaranya yaitu usia, jenis kelamin, *self estem,* sensitifitas interpersonal (*interpersonal sensitivity*) dan pengalaman traumatic.

6.1.3 *Literatur review* mengungkapkan bahwa faktor eksternal yang memengaruhi resiliensi diantaranya yaitu lama kerja, tingkat pendidikan status pekerjaan (kepegawaian) dan tingkat stress *emergency*.

## 6.2 Saran

Berdasarkan hasil *literatur review* dapat disarankan beberapa hal sebagai berikut:

6.2.1 Saran bagi perkembangan ilmu keperawatan adalah mengembangkan pemodelaan managemen keperawatan yang mencakup aspek psikologis dari pemberi asuhan (perawat) berbasis managemen bencana

6.2.2 Saran bagi peneliti selanjutnya adalah untuk dikembangkan pada penelitian selanjutnya dengan metode berbasis riset murni baik melalui pendekatan kuantitatif maupun kualitatif

6.2.3 Saran bagi pengambil kebijakan adalah memberikan arahan, dan membuat suatu kebijakan yang bijaksan dan melakukan program rehabilitasi bagi perawat pasca pandemic baik melalui healing psikologi, gathering, maupun konseling psikologi lainya serta terus memperhatikan status kepegawaian, dan imbal jasa yang layak.

6.2.4 Saran bagi perawat adalah terus patuh menjalan prosedur dan taat melakukan prosedur asuhan selama masa pandemic sehingga risiko paparan terhadap infeksi akan berkurang. Serta terus meningkatkan kinerja secara optimal dengan menunjukkan performa kerja yang baik, efisien serta menjalin mediasi dengan pimpinan dan atau managemen pada institusinya untuk menyediakan jenjang karier, dan sistem remunerasi yang baik sehingga motivasi diri bertumbuh dengan baik yang akhirnya akan meningkatkan resilensi.

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**Lampiran 1 :** Matrix Jurnal

| No | Penulis & Tahun | Judul | Metode penelitian | | | Ringkasan Hasil |
|---|---|---|---|---|---|---|
| 1 | (Zaini, 2021) | Resiliensi perawat selama masa pandemic covid-19 | **Desain**<br>**Sampel**<br>**Teknik sampling**<br>**Instrument**<br>**Analisis** | :<br>:<br>:<br>:<br>: | Korelasi; cros sectional<br>117<br>Incidental sampling<br>Kuesioner<br>*Pearson correlation* | Hasil analisis univariat pada penelitian ini menunjukkan bahwa resiliensi sebagian besar perawat di Kabupaten Jember pada tingkat yang cukup, sedangkan analisa bivariat, menunjukkan bahwa karakteristik responden berdasarkan tempat bekerja berpengaruh terhadap resiliensi seorang perawat. Selama pandemi covid-19, perawat bekerja pada lingkungan yang terbatas (*small space*), sehingga risiko masalah kesehatan juga lebih tinggi. |
| 2 | (Stevani, 2021) | The Relationship Between Self-esteem and Resilience of the Nurses on Covid-19 Officers at St. Elisabeth Semarang | **Desain**<br>**Sampel**<br>**Teknik sampling**<br>**Instrument**<br>**Analisis** | :<br>:<br>:<br>:<br>: | Korelasi; cross sectional<br>50<br>Sampel jenuh<br>Skala harga diri dan resilensi<br>*Pearson product moment* | didapatkan r = 0,934 dan skor signifikansi sebesar 0,000 (p<0,001) maka dapat dikatakan bahwa terdapat hubungan positif yang signifikan antara *self esteem* dan resiliensi pada perawat Covid-19 di RSU St. Elisabeth Semarang. Untuk mengetahui besarnya pengaruh keharmonisan keluarga terhadap kenakalan remaja dalam analisis regresi linier sederhana, dapat diketahui melalui tabel di atas bahwa nilai *R Square* sebesar 0,871. Nilai ini mengandung arti bahwa pengaruh self esteem terhadap resiliensi adalah sebesar 86%. Sedangkan 14% dipengaruhi oleh faktor |

| | | | | | | |
|---|---|---|---|---|---|---|
| | | | | | | lainnya |
| 3 | (Afshari & Daradad, 2021) | Psychosocial Factors Associated With Resilience Among Iranian Nurses During COVID-19 Outbreak | **Desain**<br>**Sampel**<br>**Teknik sampling**<br>**Instrument**<br><br><br><br>**Analisis** | :<br>:<br>:<br>:<br><br><br><br>: | Cross sectional study<br>387<br>Consensus sampling<br>Connor Davidson resilience scale; copenhagen psychological questionnaire,<br>Multypel regression analisys | Rata-rata skor resiliensi adalah sebesar 61,8 ± 14,8 untuk 387 perawat. Resiliensi memiliki korelasi negatif yang signifikan secara statistik dengan permintaan kuantitatif (r = 0,273, P < 0,008), kecepatan kerja (r = 0,262, P < 0,011), emosional (r = 0.226, P < 0,030), stres (r = 0,458, P < 0,000), dan burnout (r = 0,287, P < 0,005). Analisis regresi linier berganda menunjukkan bahwa stres, kepuasan kerja, kelelahan dan usia adalah prediktor utama ketahanan perawat selama pandemi (COVID-19) (R2 = 0,45). |
| 4 | (Xiauli et al., 2021) | Resilience of nurses in isolation wards during the COVID-19 pandemic: a cross-sectional study. | **Desain**<br>**Sampel**<br>**Teknik sampling**<br>**Instrument**<br><br><br>**Analisis** | :<br>:<br>:<br>:<br><br><br>: | Cros sectional study<br>92<br>Convenient sampling<br>Connor-Davidson Resilience Scale (CD-RISC)<br>Chi square | Dampak intervensi suportif terhadap resiliensi dan gejala psikopatologi penilaian diri dari 92 perawat di ruang isolasi selama pandemi COVID-19 dievaluasi. Ketahanan dan gejala psikopatologis perawat di bangsal isolasi dinilai dengan Connor-Davidson Resilience Scale (CD-RISC) dan Symptom Checklist 90 (SCL-90). Skor resiliensi total adalah 87,04 ± 22,78. Skor SCL-90 adalah 160 hingga 281 (202,5 ± 40,79). Hanya 8,70% perawat (n = 8) yang memiliki skor total SCL-90 >160, menunjukkan gejala positif. Mayoritas perawat memiliki 0 sampai 90 item penilaian diri yang positif (median 14); 19,57% (n = 18) memiliki > 43 item positif. Sensitivitas interpersonal, |

| | | | | | | |
|---|---|---|---|---|---|---|
| | | | | | | depresi, permusuhan, dan skor ide paranoid berada di bawah rata-rata nasional (p=0,000, 0,040, 0,002, 0,004). Item SCL-90 yang mencerminkan diet dan kondisi tidur lebih tinggi (P = 0,009), dan domain dan skor somatisasi, obsesif-kompulsif, kecemasan, kecemasan fobia, dan psikotisisme serupa dengan rata-rata nasional (P>0,3). |
| 5 | (Maiorano & Vagni, 2020) | Covid-19: Risk Factors and Protective Role of Resilience and Coping Strategies for Emergency Stress and Secondary Trauma in Medical Staff and Emergency Workers An Online Based Inquiry | **Desain**<br>**Sampel**<br>**Teknik sampling**<br>**Instrument**<br><br>**Analisis** | :<br>:<br>:<br>:<br><br>: | Cross sectional<br>240<br>Random sampling<br>ESQ, DRS, coping strategies<br>Linier regression | Kontak langsung dengan pasien COVID-19, jenis kelamin perempuan, kejadian tak terduga, dan kurangnya APD merupakan faktor risiko stres darurat dan berkaitan dengan resiliensi dan strategi koping memainkan peran protektif. Analisis mediasi menunjukkan bahwa strategi koping dan resilensi merupakan faktor protektif dan mengurangi efek stres pada trauma sekunder |
| 6 | (Castro et al., 2021) | Analysis of Burnout Syndrome and Resilience in Nurses | **Desain**<br>**Sampel**<br>**Teknik sampling**<br>**Instrument** | :<br>:<br>:<br>: | cross sectional<br>101<br>Random sampling<br>Maslah murnout inventory, Connor- | Nilai rata-rata burnout adalah 74,35 ± 12,78 poin, dan resiliensi 27,94 ± 5,84. Perawat sementara mencapai skor rata-rata yang lebih rendah untuk dimensi kelelahan emosional (23,80 ± 10,39 poin) p <0,05. Dimensi |

| | | | | |
|---|---|---|---|---|
| | throughout the COVID-19 Pandemic: A Cross-Sectional Study | **Analisis** : | Davidson Resilience Scale (CD-RISC) anova | kelelahan emosional berkorelasi stress dengan skor rata-rata resiliensi (r = -0,271; p <0,001). Kesimpulan: Tingkat burnout pada perawat tinggi, lebih tinggi pada perawat yang merawat pasien COVID-19. Perawat yang tress mampu mengatasi situasi tress dengan lebih baik. |

**Lampiran 2:** Analisis Sintesis

**ANALISIS TAHUN PUBLIKASI**

| No | Penulis | Tahun | Analisis |
|---|---|---|---|
| 1 | (Zaini, 2021) | 2021 | n = 6 artikel<br>2021: 5 arikel = 83,33%<br>2020: 1 artikel = 16,67% |
| 2 | (Stevani, 2021) | 2021 | |
| 3 | (Afshari & Daradad, 2021) | 2021 | |
| 4 | (Xiauli et al., 2021) | 2021 | |
| 5 | (Maiorano & Vagni, 2020) | 2020 | |
| 6 | (Castro et al., 2021) | 2021 | |

**ANALISIS JENIS PUBLIKASI**

| No | Penulis | Jenis | Analisis |
|---|---|---|---|
| 1 | (Zaini, 2021) | Lokal | n = 6 artikel<br>Lokal: 2 artikel = 33,33%<br>Internasional: 4 artikel = 66,67% |
| 2 | (Stevani, 2021) | Lokal | |
| 3 | (Afshari & Daradad, 2021) | Internasional | |
| 4 | (Xiauli et al., 2021) | Internasional | |
| 5 | (Maiorano & Vagni, 2020) | Internasional | |
| 6 | (Castro et al., 2021) | Internasional | |

**ANALISIS BAHASA YANG DIGUNAKAN DALAM ARTIKEL**

| No | Penulis | Bahasa | Analisis |
|---|---|---|---|
| 1 | (Zaini, 2021) | Indonesia | n = 6 artikel<br>Indonesia : 2 artikel = 33,33%<br>Inggris : 4 artikel = 66,67% |
| 2 | (Stevani, 2021) | Indonesia | |
| 3 | (Afshari & Daradad, 2021) | Inggris | |
| 4 | (Xiauli et al., 2021) | Inggris | |
| 5 | (Maiorano & Vagni, 2020) | Inggris | |
| 6 | (Castro et al., 2021) | Inggris | |

**ANALISIS: JENIS KELAMIN**

| No | Penulis | Proporsi | | n |
|---|---|---|---|---|
| | | Laki | Perempuan | |
| 1 | (Zaini, 2021) | 70 (59,8) | 47 (40,2) | 117 |
| 2 | (Stevani, 2021) | 36 (72) | 14 (28) | 50 |
| 3 | (Afshari & Daradad, 2021) | 236 (61) | 151 (39) | 387 |
| 4 | (Xiauli et al., 2021) | 7 (7,6) | 86 (92,4) | 92 |
| 5 | (Maiorano & Vagni, 2020) | 141 (58,8) | 99 (41,3) | 240 |
| 6 | (Castro et al., 2021) | 8 (7,9) | 93 (92,07) | 101 |

**ANALISIS : LAMA KERJA**

| No | Penulis | Proporsi | | | | | | n |
|---|---|---|---|---|---|---|---|---|
| | | **<1** | **>1** | **<3** | **3-5** | **5-10** | **>10** | |
| 1 | (Zaini, 2021) | 29(24,7) | 88(75,21) | n/a | n/a | n/a | n/a | 117 |
| 2 | (Stevani, 2021) | n/a | n/a | n/a | n/a | n/a | n/a | 50 |
| 3 | (Afshari & Daradad, 2021) | 8,31 ±3,74 | | | | | | 387 |
| 4 | (Xiauli et al., 2021) | n/a | n/a | 13(14,1) | 21(22,8) | 31(33,7) | 27(29,7) | 92 |
| 5 | (Maiorano & Vagni, 2020) | n/a | n/a | n/a | n/a | n/a | n/a | 240 |
| 6 | (Castro et al., 2021) | n/a | | | | | | 101 |

**ANALISIS : STATUS MARITAL**

| No | Penulis | Proporsi | | n |
|---|---|---|---|---|
| | | **Belum menikah (*single*)** | **Menikah (*married*)** | |
| 1 | (Zaini, 2021) | n/a | n/a | 117 |
| 2 | (Stevani, 2021) | n/a | n/a | 50 |
| 3 | (Afshari & Daradad, 2021) | 199(51,4) | 188(48,6) | 387 |
| 4 | (Xiauli et al., 2021) | 47(51,1) | 42(45,7)<br>Cerai; 3(3,3) | 92 |
| 5 | (Maiorano & Vagni, 2020) | n/a | n/a | 240 |
| 6 | (Castro et al., 2021) | n/a | n/a | 101 |

**ANALISIS : USIA**

| No | Penulis | Proporsi usia | n |
|---|---|---|---|
| 1 | (Zaini, 2021) | 30,62 Tahun (SD=7,94; 19-53) | 117 |
| 2 | (Stevani, 2021) | n/a | 50 |
| 3 | (Afshari & Daradad, 2021) | 34,42 ± 6,37 tahun (23-57) | 387 |
| 4 | (Xiauli et al., 2021) | 30,48 ± 8,35 tahun | 92 |
| 5 | (Maiorano & Vagni, 2020) | 43,18 tahun (SD=11,05; 22-67) | 240 |
| 6 | (Castro et al., 2021) | 41,27 ± 10,03 tahun | 101 |

**ANALISIS: STATUS BEKERJA (KEPEGAWAIAN)**

| No | Penulis | Proporsi | | | n |
|---|---|---|---|---|---|
| | | Tidak tetap | Kontrak | Tetap | |
| 1 | (Zaini, 2021) | n/a | 47(40,2) | 70(59,8) | 117 |
| 2 | (Stevani, 2021) | n/a | n/a | n/a | 50 |
| 3 | (Afshari & Daradad, 2021) | 47(12,1) | 198(51,2) | 142(36,7) | 387 |
| 4 | (Xiauli et al., 2021) | 16(17,4) | 48(52,2) | 28(30,43) | 92 |
| 5 | (Maiorano & Vagni, 2020) | n/a | n/a | n/a | 240 |
| 6 | (Castro et al., 2021) | 21(20,79) | 40(39,6) | 40 (39,6) | 101 |

**ANALISIS: TINGKAT PENDIDIKAN**

| No | Penulis | Proporsi | | | n |
|---|---|---|---|---|---|
| | | Diploma(vokasi) | Bachelor | Master | |
| 1 | (Zaini, 2021) | n/a | n/a | n/a | 117 |
| 2 | (Stevani, 2021) | n/a | n/a | n/a | 50 |
| 3 | (Afshari & Daradad, 2021) | 47(12,1) | 198(51,2) | 142(36,7) | 387 |
| 4 | (Xiauli et al., 2021) | 19(20,7) | 71(77,2) | 2(2,2) | 92 |
| 5 | (Maiorano & Vagni, 2020) | n/a | n/a | n/a | 240 |
| 6 | (Castro et al., 2021) | n/a | n/a | n/a | 101 |

**ANALISIS: RESILIENSI**

| No | Penulis | Temuan | Analisis |
|---|---|---|---|
| 1 | (Zaini, 2021) | Nilai median 32 (SD=4,85; 23-40) 60% responden memiliki ketahanan psikologis cukup | Tinggi |
| 2 | (Stevani, 2021) | Nilai median 124 (SD=16; 74-134), kategori resiliensi tinggi | Tinggi |
| 3 | (Afshari & Daradad, 2021) | Berdasarkan *Connor–Davidson Resilience Scale* (CD-RISCH) nilai mean sebesar 60 dan sebanyak 12% memiliki nilai >80 yang termasuk dalam kategori tinggi, dan sisanya sebagian besar dalam ketegori cukup | Cukup |
| 4 | (Xiauli et al., 2021) | Berdasarkan *Connor–Davidson Resilience Scale* (CD-RISCH) nilai mean sebesar 87,04±22,78 (25-125) menunjukkan tingkat resilensi yang tinggi. Berdasarkan dimensi resilensi diketahui dimensi keuletan (*tenacy*) sebesar 43.97 ± 12.43. kekuatan (*stregh*t) sebesar 29,65±7,32 , optimisme (*optimism*) sebesar 13,42±3,92 | Tinggi |
| 5 | (Maiorano & Vagni, 2020) | Berdasarkan pengukuran menggunakan *dispositional resilience scale*-15 diketahui bahwa nilai 27,79 (SD=4,42) yang menunjukkan resilensi tinggi | Tinggi |
| 6 | (Castro et al., 2021) | Nilai skor rata rata resiliensi sebesar 27,94±5,84; dimana pada perawat perempuan menunjukkan skor rata- rata 28,07±5,93, sedangkan pada laki laki sebesar 26,37±4,65 yang menunjukkan tingkat resilensi yang cukup | Cukup |

**ANALISIS : FAKTOR YANG BERHUBUNGAN DENGAN RESILIENSI**

| No | Penulis | Faktor yang berhubungan | Hasil statistik | Analisis |
|---|---|---|---|---|
| 1 | (Zaini, 2021) | Usia<br>(30,62±7,94) skor 32 | p-value: 0,07 | Internal |
| | | Lama kerja | p-value: 0,09 | Eksternal |
| 2 | (Stevani, 2021) | Terdapat hubungan positif yang signifikan antara self esteem dan resiliensi pada perawat dengan pengaruh sebesar 87% | R Square: 0,871<br>r=0,934<br>p-value:0,000 | Internal |
| 3 | (Afshari & Daradad, 2021) | Jenis kelamin<br>Female 59.53 (14.9)<br>Male 62.36 (14.46) | p-value:0,03 | Internal |
| | | Usia<br>37-44 nilai skor 63,22(SD: 13,24) | r=0,304<br>p-value:0,004 | Internal |
| | | Pendidikan<br>*Associate degree* 60.02 (12.6)<br>*Bachelor degree* 61.67 (15.3)<br>*Master degree* 63.23 (13.42) | r=0,201<br>p-value:0,044 | Eksternal |
| | | Lama kerja (*work experience*)<br>1–5 53.29 (15.1)<br>5–10 60.12 (15.26)<br>10–15 61.27 (8.3)<br>15–20 67.73 (13.4) | r=0,226<br>p-value:0,030 | Eksternal |
| 4 | (Xiauli et al., 2021) | Sensitifitas interpersonal (*Interpersonal sensitivity*)<br>Nilai skor 12,54±4,00 (16,30%) dalam keategori baik. Semakin tinggi tingkat sesnsitifitas interpersonal maka semakin tinggi nilai skor resiliensinya | p-value:0,030 | Internal |
| 5 | (Maiorano & Vagni, 2020) | Jenis kelamin<br>Laki-laki>perempuan | p-value:0,001 | Internal |

| | | | | |
|---|---|---|---|---|
| | | Tingkat emergensi stres<br>Nilai resilensi menunjukkan penurunan seiring dengan bertembahnya skor *emergency stress* sebesar -0,344 | p-value:0,001 | Eksternal |
| | | Pengalaman traumatic<br>Resiliensi lebih tinggi didapatkan pada perawat yang tidak memiliki trauma masa lalu dengan pengaruh sebesar 0,351 (35,1%) | p-value:0,001 | Internal |
| 6 | (Castro et al., 2021) | Status pekerjaan<br>Nikai skor rsielensi tettinggi pada staf perawat dengan status tetap= 48,93 ± 8,24 | p-value:0,001 | Eksternal |
| | | Jenis kelamin<br>Skor resiliensi tertinggi pada perempuan =28,07±5,93, | p-value:0,001 | Internal |

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# RESILIENSI PERAWAT SELAMA MASA PANDEMI COVID-19

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## ABSTRAK

Perawat menjadi salah satu garda terdepan dalam penanganan, pencegahan, dan perawatan pasien Covid-19. Beberapa masalah psikososial pada perawat muncul sebagai respon dari koping yang maladaptif. Penelitian ini dilakukan untuk mengetahui resiliensi perawat dan faktor-faktor yang mempengaruhinya. Penelitian ini merupakan penelitian deskriptif korelasi *cross-sectional*, dilakukan pada perawat di Kabupaten Jember dari bulan Juli-Agustus 2020. Sebanyak 117 responden diambil menggunakan teknik insidental sampling. Analisis data bivariat dalam penelitian ini menggunakan uji *pearson correlation*. Hasil analisis univariat pada penelitian ini menunjukkan bahwa resiliensi sebagian besar perawat di Kabupaten Jember pada tingkat yang cukup, sedangkan analisa bivariat, menunjukkan bahwa karakteristik responden berdasarkan tempat bekerja berpengaruh terhadap resiliensi seorang perawat. Selama pandemi covid-19, perawat bekerja pada lingkungan yang terbatas (*small space*), sehingga resiko masalah kesehatan juga lebih tinggi. Jika perawat tidak siap dengan kondisi tersebut, maka dapat memunculkan mekanisme koping yang maladaptif. Koping yang maladaptif dapat mengurangi resiliensi perawat.

Kata kunci: ketahanan psikologi, pandemi, perawat

## *NURSE RESILIENCE DURING THE COVID-19 PANDEMIC*

## *ABSTRACT*

*Nurses are at the forefront of handling, preventing and treating Covid-19 patients. Some psychosocial problems in nurses arise in response to maladaptive coping. This study was conducted to determine the resilience of nurses and the factors that influence it. This study is a descriptive cross-sectional correlation study, which was conducted on nurses in Jember Regency from July-August 2020. A total of 117 respondents were taken using incidental sampling technique. Bivariate data analysis in this study used the Pearson correlation test. The results of the univariate analysis in this study showed that the resilience of most nurses in Jember Regency was at a sufficient level, while the bivariate analysis showed that the characteristics of the respondents based on the place of work had an effect on the resilience of a nurse. During the COVID-19 pandemic, nurses work in a limited environment, so the risk of health problems is also higher. If the nurse is not ready for these conditions, the nurse can bring up maladaptive coping mechanisms. Maladaptive coping can reduce nurse resilience.*

*Keywords: nurses; pandemic; resilience*

## PENDAHULUAN

Pandemi covid-19 yang saat ini terjadi tidak hanya memberikan dampak pada fisik tetapi juga berdampak serius terhadap kesehatan psikologi. Berbagai masalah kesehatan fisik dan psikologi telah dipublikasi selama pandemi covid-19 baik pada tingkat individu maupun masyarakat. Krisis kesehatan selama pandemi covid-19 menyebabkan perubahan psikologi seseorang seperti ketakutan, kecemasan serta ketidaknyamanan (Cheng, Q., Liang, M., Li, Y., He, L., Guo, J., Fei, D., Zhang, Z. 2020).. Perubahan ini tidak hanya dirasakan oleh masyarakat tetapi juga dirasakan oleh tenaga kesehatan terutama perawat.

Badan kesehatan dunia (WHO) memprediksi bahwa covid-19 diprediksi akan berlangsung lama. Mengingat pentingnya menjaga kesehatan di era pandemi ini maka setiap individu

diharapkan mampu bertahan serta beradaptasi dengan perubahan dan rutinitas baru selama masa pandemi covid-19 bahkan di era normal baru (WHO, 2020). Kondisi tersebut tentunya menjadi tantangan bagi masyarakat termasuk tenaga kesehatan untuk beradaptasi dengan perubahan-perubahan selama pandemi covid-19. Individu yang tidak mampu beradaptasi selama periode pandemi akan menimbulkan masalah secara individu maupun sosial (Thakur, V., & Jain, 2020b).

Masalah yang dialami tenaga kesehatan selama masa pandemi seringkali berpengaruh pada perubahan peran baik di lingkungan keluarga, masyarakat atau tempat kerja. Perubahan-perubahan tersebut dipersepsikan dengan suatu kondisi krisis, mengancam dan menimbulkan banyak kehilangan baik kesehatan, finansial maupun secara sosial (Wang, C., Pan, R., Wan, X., Tan, Y. & L., Ho, C. S., & Ho, 2020). Mekanisme munculnya masalah kesehatan psikologis pada individu di era pandemi berkaitan dengan kerja sistem saraf otonom dan neurotransmitter. Stresor yang muncul menyebabkan pelepasan epinefrin dari adrenal (Pfefferbaum, B., & North, 2020). Ancaman selama masa pandemi covid-19 dipersepsikan oleh panca indera, kemudian diteruskan ke korteks serebri, kemudian ke sistem limbik dan RAS (*reticular activating system*), lalu ke hipotalamus dan hipofisis. Selanjutnya kelenjar adrenal mensekresikan katekolamin dan terjadilah stimulasi saraf otonom (Généreux, 2020). Hiperaktivitas sistem saraf otonom akan mempengaruhi berbagai sistem organ dan menyebabkan gejala tertentu seperti takikardi, peningkatan tekanan darah, nyeri kepala, ketegangan otot, diare dan pernafasan cepat (Guo, Q., Zheng, Y., Shi, J., Wang, J. et al., 2020).

Penelitian-penelitian sebelumnya telah menyatakan bahwa masalah kesehatan psikologi dari suatu bencana besar memiliki dampak yang lebih luas dan lebih lama dibandingkan dengan cedera fisik, sedangkan perhatian pada kesehatan psikologi jauh lebih sedikit, baik dari segi pengadaan personel untuk perencanaan dan sumber daya (Zandifar, A & Badrfam, 2020). Hasil penelitian lain tentang dampak psikologis pada tenaga kesehatan selama masa pandemi covid-19 menunjukkan bahwa bahwa 60,8% tenaga kesehatan mengalami kecemasan dengan berbagai tingkatan dan gelaja serta 15,7% tenaga kesehatan tidak mengalami kecemasan (International Council of Nurses, 2020). Hasil tersebut menunjukkan bahwa prevalensi masalah kesehatan psikologis sebagai akibat dari pandemi covid-19 masih tinggi terutama pada tenaga kesehatan yang setiap saat berinteraksi dengan pasien dengan masalah kesehatan. Kondisi krisis akibat pandemi covid-19 memerlukan kemampuan untuk bangkit agar tetap bisa bertahan dan menyesuaikan dengan kondisi krisis (Guo, Q., Zheng, Y., Shi, J., Wang, J. et al., 2020).

Kemampuan individu untuk tetap bertahan, bangkit dan menyesuaikan dengan kondisi krisis seperti saat ini disebut dengan *resiliensi* atau ketahanan psikologi (Maia, Berta Rodrigues And Dias, 2020). Resiliensi atau ketahanan psikologi seorang perawat diperlukan agar memunculkan perasaan optimis dan sikap positif dari setiap peristiwa yang dialami. Perasaan optimis dan sikap positif akan memudahkan tenaga kesehatan beradaptasi selama masa pandemi serta tetap menjalankan tugasnya dalam memberikan pelayanan kesehatan. Pada penelitian ini, peneliti ingin mengetahui resiliensi perawat selama masa pandemi covid-19 serta hubungan antara usia, lama bekerja dan instansi tempat bekerja dengan resiliensi perawat di Kabupaten Jember selama masa pandemi covid-19.

## METODE

Desain pada penelitian ini adalah deskriptif dengan pendekatan *cross sectional*. Populasi dalam penelitian ini adalah perawat yang bekerja di instansi pemerintah atau swasta di Kabupaten Jember. Sebanyak 117 responden diambil secara *incidental sampling*, yaitu teknik penentuan sampel berdasarkan kebetulan. Perawat yang secara kebetulan/*incidental* bertemu dengan peneliti serta kebetulan cocok sebagai sumber data digunakan sebagai responden dalam penelitian ini.

Metode pengumpulan data menggunakan kuesioner. Kuesioner yang digunakan peneliti untuk mengukur tingkat resiliensi perawat adalah CD-RISC10 (Connor-Davidson Resilience Scale 10) yang pertama kali disusun oleh Connor-Davidson dan kemudian disempurnakan kembali oleh Campbell-Sills dan Stein (2007) menjadi 10 item pertanyaan. Di Indonesia instrument CD-RISC10 sudah dikembangkan oleh Pusat Krisis Fakultas Psikologi Universitas Indonesia dan disesuaikan dengan karakteristik masyarakat Indonesia dan sudah diuji reliabilitas maupun validitas, masing-masing sebesar 0,87 dan ≥0,2, menggunakan skala Likert dari pilihan 1 “tidak pernah sama sekali”, 2 “hampir tidak pernah”, 3 “sering”, 4 “hampir selalu”. Penelitian ini juga telah dilakukan uji etik dan hasilnya layak etik dengan nomor 2150/KEPK/FIKES/IX/2021.

## HASIL

### Kakarteristik responden

Karakteristik responden dikelompokkan berdasarkan usia dan resiliensi dapat diketahui pada tabel berikut ini.

Tabel 1.
Distribusi karakteristik responden usia dan ketahanan psikologi (n = 117)

| Karakteristik | Mean | Median | SD | Min-Maks | Persentase |
|---|---|---|---|---|---|
| Usia | 30,62 | 28,00 | 7,94 | 19-53 | 53% |
| Resiliensi | 2,76 | 32,00 | 4,85 | 23-40 | 40% |

Tabel 1 rata-rata usia responden secara keseluruhan adalah 30,62 tahun. Usia termuda 19 tahun dan usia tertua 53 tahun. Nilai media untuk karakteristik usia adalah 28,00 (SD = 7,94). Berdasarkan nilai median untuk karakteristik usia, maka 53% dari nilai ukur maksimum responden berusia diatas nilai median. Nila rata-rata resiliensi perawat adalah 32,76. Nilai median untuk karakteristik ketahanan psikologi adalah 32,00 (SD = 4,85). Berdasarkan nilai median untuk karakteristik ketahanan psikologi, maka 40% dari nilai ukur maksimum responden mempunyai ketahanan psikologi diatas median (60% responden ketahanan psikologi <32 atau ketahanan psikologi cukup).

Tabel 2.
Distribusi karakteristik responden berdasarkan jenis kelamin, lama bekerja dan Instansi bekerja (n = 117)

| Karakteristik | f | % |
|---|---|---|
| Lama Bekerja | | |
| < 1 tahun | 29 | 24,8 |
| > 1 tahun | 88 | 75,2 |
| Instansi Bekerja | | |
| Puskesmas/Klinik | 47 | 40,2 |
| Rumah Sakit | 70 | 59,8 |

Tabel 2 diketahui bahwa sebagian besar responden adalah perempuan (61,5%). Menurut lama bekerja, sebagian besar responden sudah bekerja lebih dari 1 tahun (75,2%). Merurut instansi tempat bekerja, sebagian besar responden bekerja di instansi rumah sakit (59,8%).

**Hubungan karakteristik responden dengan resiliensi**

Hasil analisis hubungan antara karakteristik responden dengan resiliensi seorang perawat dapat diketahui dari tabel berikut ini.

Tabel 3.
Analisis hubungan karakteristik responden dengan resiliensi seorang perawat (n=117)

| Variabel independen | Variabel dependen | P value |
|---|---|---|
| Usia | | 0,07 |
| Lama bekerja | Resiliensi | 0,09 |
| Instansi tempat bekerja | | 0,01 |

Hasil analisis hubungan antara karakteristik responden berdasarkan usia, lama bekerja dan instansi tempat bekerja dengan resiliensi seorang perawat diketahui bahwa *p value* dari masing-masing karakteristik adalah >0,05 keculia karakteristik intansi tempat bekerja yaitu 0,01. Nilai *p value* untuk karakteristik intansi tempat bekerja <0,05 yang berarti ada hubungan antara intansi tempat bekerja dengan resiliensi seorang perawat.

## PEMBAHASAN

**Karakteristik responden berdasarkan usia, lama bekerja, tempat bekerja dan resiliensi**

Usia merupakan variabel yang sering dikaitkan dengan kondisi perkembangan psikologi seseorang. Hasil penelitian ini diperoleh rata-rata usia perawat di Kabupaten Jember adalah dewasa menengah. Berdasarkan analisis univariat menunjukkan bahwa rata-rata usia responden adalah 30,62 tahun dengan usia termuda adalah 19 tahun dan usia tertua adalah 53 tahun. Rentang umur 19-53 tahun adalah rentang umur dewasa menengah, dimana pada perkembangan dewasa menengah tersebut individu tidak lagi berorientasi pada ego atau diri sendiri namun lebih kepada tugas yang menjadi tanggung jawabnya (Joy M, McGaghD, Jones N, 2020).

Lama bekerja seorang perawat juga menjadi variabel yang sering dikaitkan dengan kesehatan psikologinya (Zhang, J., Wu, W., Zhao, X., & Zhang, 2020). Individu yang bekerja lebih lama, seringkali semangat untuk pencapaian dan peningkatan dalam bekerja menjadi berkurang. Berdasarkan analisis univariat menunjukkan bahwa sebagian besar lama bekerja perawat pada penelitian ini adalah >1 tahun (75,2%). Lama berkerja bisa menjadi salah satu rujukan bagi seorang perawat dalam menyelesaikan masalah ketika menghadapi kondisi krisis terutama berkaitan dengan tugas dan tanggungjawab sebagai seorang profesi (International Council of Nurses, 2020). Individu akan menggunakan cara-cara sesuai pengalamannya agar dapat beradaptasi dengan perubahan yang terjadi.

Hasil analisis univariat dalam penelitian ini menunjukkan bahwa sebagian besar perawat bekerja di instansi rumah sakit (59,8%). Bekerja sebagai perawat di puskesmas atau rumah sakit mempunyai dampak positif dan negative (Zhu N, Zhang D, 2020). Dampak positif yang diperoleh diantaranya dapat memenuhi kebutuhan dasar manusia meliputi kebutuhan fisiologis, hingga kebutuhan aktualisasi diri. Dampak negatif yang mucul sangat beragam terutama selama periode pandemi covid-19, baik secara fisik meliputi kelelahan, kecelakan

kerja, cidera dan terkontaminasi bahan kimia maupun dampak psikologis yang sering dirasakan (Zhang, J., Wu, W., Zhao, X., & Zhang, 2020).

**Hubungan karakteristik usia dengan resiliensi**

Hasil uji analisa bivariat menunjukkan bahwa tidak ada hubungan yang signifikan antara karakteristik usia dengan resiliensi. Resiliensi dibangun dari kemampuan psikologi individu dimana setiap individu berbeda-beda dan dipengaruhi oleh aspek yang multidimensi, tidak hanya aspek usia namun kehidupan sosial mempengaruhi ketahanan psikologi (Panter-brick, Grimon, Kalin, & Eggerman, 2015). Peneliti berpendapat bahwa usia seseorang akan berkorelasi signifikan terhadap resiliensi apabila individu tersebut dalam kondisi tidak tertekan psikologisnya. Kondisi saat ini juga sejalan dengan hasil penelitian yang menunjukkan bahwa tidak ada korelasi yang signifikan antara umur dengan resiliensi. Kondisi pandemi covid-19 yang terjadi saat ini menimbulkan banyak masalah yang dialami masyarakat termasuk perawat. Tekanan fisik dan psikis, resiko infeksi yang meningkat, kelelahan, kurangnya interaksi dengan keluarga, diskriminasi serta isolasi tentu menjadikan perawat menghadapi masalah dalam menjalani tugas dan kehidupan sehari-hari kedepannya bahkan mempengaruhi kesejahteraan perawat (Thakur, V., & Jain, 2020a).

**Hubungan karakteristik lama bekerja dengan resiliensi**

Hasil analisis bivariat antara karakteristik lama bekerja dengan resiliensi perawat menunjukkan hasil yang tidak signifikan (*p value* > 0,05). Resiliensi seorang perawat terbentuk dari sikap adaptif dengan melakukan beberapa upaya yang positif sesuai pengalaman yang dimiliki sehingga mampu untuk menjalankan tugas dan tanggungjawab. Semakin lama seorang individu menjalankan tugas dan kewajibannya maka individu tersebut diasumsikan semakin adaptif (Eggerman. M, Kalin. M, Grimon. M.P, 2015). Penelitian lain menyebutkan bahwa setiap individu mempunyai respon yang berbeda-beda terhadap kondisi krisis, tergantung dari pengalaman yang diperoleh selama berada pada kondisi krisis di masa lalu (Panter-brick et al., 2015).

Individu yang baru bekerja dan menghadapi kondisi krisis di tempat kerja akan mengalami tekanan psikologi yang lebih tinggi dibandingkan dengan individu yang sudah lama bekerja dan memiliki pengalaman dalam menghadapi kondisi krisis. Hasil penelitian lain terkait lama bekerja seorang perawat memberikan gambaran bahwa perawat yang memiliki masa kerja lebih lama mampu berfokus pada bagaimana menyelesaikan masalah yang ia hadapi (Cao, X & Yu, 2019). Pengalaman dalam menghadapi kondisi krisis akan sangat bermanfaat untuk membantu perawat menentukan sikap dan perilaku adaptif.

Peneliti berpendapat bahwa pengalaman perawat menghadapi kondisi krisis seperti pandemi covid-19 saat ini berbeda-beda, tergantung dari cara perawat mempersepsikan kondisi krisis tersebut (Cao, W., Fang, Z., Hou, G., Han, M., Xu, X., Dong, J., & Zheng, 2020). Seorang perawat menjadi lebih resilien atau ketahanan psikologi lebih baik ketika ia mempunyai persepsi yang positif terhadap kejadian trauma yang ia alami sebelumnya, sebaliknya perawat menjadi tidak resilien atau ketahanan psikologisnya berkurang ketika ia mempunyai persepsi yang negatif serta mekanisme koping yang maladaptif dalam menjalankan tugas dan tanggungjawabnya selama pandemi covid-19. Mekanisme koping yang maladaptif merupakan koping yang menurunkan kemandirian, optimisme dan menghambat fungsi integritas seorang perawat (Stuart, GW., Keliat, B.A., Pasaribu, 2015).

**Hubungan karakteristik tempat bekerja dengan resiliensi**

Hasil analisis bivariat antara karakteristik instansi tempat bekerja dengan resiliensi seorang perawat menunjukkan hasil yang signifikan (*p value* = 0,01). Pelayanan keperawatan di rumah sakit diberikan oleh perawat selama 24 jam. Pada penelitian ini, sebagian besar perawat yang menjadi responden bekerja di instansi rumah sakit. Profesi perawat tidak bisa dipisahkan dengan interaksi terhadap pasien dan profesi kesehatan lainnya terutama dalam memberikan pelayanan kesehatan (Berman, 2016).

Selama pandemi covid-19, seorang perawat dalam menjalankan tugasnya dituntut untuk siap siaga selama melaksanakan pelayanan keperawatan. Selain hal itu, perawat wajib mengevaluasi perkembangan kesehatan pasien selama dalam perawatan (International Council of Nurses., 2020). Selain tuntutan pelayanan, konflik di tempat kerja dimana perawat bekerja dapat mempengaruhi kondisi psikologi seorang perawat. Dengan demikian beban fisik dan psikologi seorang perawat cukup besar terutama selama pandemic covid-19.

Peneliti berpendapat bahwa perawat yang bekerja di rumah sakit memiliki beban kerja yang lebih besar dibandingkan perawat yang bekerja di puskesmas. Perawat yang bekerja di rumah sakit berada dalam lingkungan yang terbatas (*small space*), yang memungkinkan ia dekat dengan pasien untuk dapat mengobservasi kondisi pasien dan mengevaluasi tindakan keperawatan maupun tindakan medis yang dilakukan sehingga resiko masalah kesehatan selama pandemi covid-19 lebih tinggi (Chang J, 2020). Jika perawat yang bekerja di rumah sakit tidak siap dengan kondisi tersebut, maka dapat memunculkan mekanisme koping yang maladaptif. Koping yang maladaptif dapat mengurangi ketahanan psikologi seseorang.

## SIMPULAN

Resiliensi seorang perawat dapat artikan sebagai respons adaptif dari seorang perawat terhadap stressor yang berasal dari kondisi krisis. Dengan adanya resiliensi atau ketahanan psikologi, maka bisa dijelaskan bahwa setiap perawat mempunyai respons yang berbeda-beda terhadap stressor. Perawat dengan resiliensi atau ketahanan psikologi yang kurang akan berespons secara maladaptif terhadap stressor atau kondisi krisis. Di sisi lain ada juga perawat yang menghadapi kondisi krisis yang sama namun ia tidak menunjukkan respon maladapti, sehingga disinilah letak perbedaan resiliensi atau ketahanan psikologi seorang perawat.

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# *The Relationship Between Self-esteem And Resilience of the Nurses On Covid-19 Officers at St. Elisabeth Semarang*

**Hubungan antara harga diri dengan resiliensi pada perawat petugas Covid-19 di RS St. Elisabeth Semarang**

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**Abstract:** *The aim of this study was to determine the relationship between self-esteem and the resilience of nurses for Covid-19 officers at St. Elisabeth Semarang. The number of participants in this studey was 50 participants with saturaated sampling data collection techniques. Data were analyzed using Pearson Product Moment correlation technique. The coefficient obtained is 0.934 with a significance of 0.000 ($p < 0.05$) so it can be concluded that there is a positive relationship between self-esteem and resilience variables in Covid-19 nurses at ST. Hospital Elisabeth Semarang. The hypothesis proposed in this study is accepted , meaning that the higher the self-esteem, the higher the self-resilience of a Covid-19 nurse officer, conversely the lower the self-esteem, the lower the self-esteem, the lower the self-resilience of a Covid-19 nurse.*

**Keywords:** *self-esteem, resilience, nurses.*

**Conflict of Interest Disclosures:**
The authors declare that they have no significant competing financial, professional or personal interests that might have influenced the performance or presentation of the work described in this manuscript.



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## Pendahuluan

Pada akhir 2019, dunia diguncangkan dengan adanya kasus penyakit virus corona atau yang disingkat (COVID-19). Menurut WHO, kasus COVID-19 pertama yang dikonfirmasi berada di China pada Bulan Desember 2019 (Puspita: Kompas.com, 2020). Kasus pertama kali terjadi ada di Kota Wuhan dimana pada Bulan Desember 2019 terdapat kasus mengenai pneunomia misterius pertama kali dilaporkan di Wuhan menurut Yunihastuti (2020). Pada tanggal 2 Maret 2020 Indonesia mendapat kasus pertama COVID-19 yang ditularkan melalui transmisi dari manusia ke manusia, banyak upaya

telah dilakukan oleh Pemerintah RI, salah satunya dengan membentuk Gugus Tugas Percepatan Penanganan COVID-19 yang disahkan melalui Keputusan Presiden RI No.7 Tahun 2020 (tim komunikasi penanganan COVID-19: covid19.go.id,2020).

Bertambahnya kasus COVID-19 yang tidak berbanding sama dengan ketersediaan tenaga kesehatan ditandai dengan Kementrian Kesehatan Indonesia membuka rekruitmen relawan tenaga kesehatan penanganan COVID-19 pada Bulan April 2020 (ktki: ktki.kemkes.go.id,2020). Tim Mitigasi PB Ikatan Dokter Indonesia, mencatat jumlah kematian tenaga medis dan tenaga kesehatan di Indonesia akibat COVID-19 terus mengalami kenaikan, seiring dengan meningkatnya jumlah kasus COVID-19 di Indonesia, berdasarkan data dari Bulan Maret hingga pertengahan Bulan Desember terdapat total 369 petugas medis dan kesehatan yang wafat akibat terinfeksi virus corona dalam verifikasi yang keseluruhannya berasal dari 24 IDI Wilayah (provinsi) dan 92 IDI Cabang Kota/Kabupaten ( Putri: antaranews.com, 2020).

Berdasarkan data provinsi yang ada khusunya Jawa Tengah menjadi provinsi dengan kematian petugas kesehatan akibat COVID-19 di urutan ketiga (Pranita: Kompas.com, 2020). Sebanyak 647 petugas medis dan tenaga kesehatan yang wafat akibat terinfeksi Covid-19 membuat Indonesia menjadi nomor tiga terbesar di Asia dalam kategori kematian petugas medis dan kesehatan. Tekanan yang dialami oleh para tenaga medis terkhusus perawat petugas Covid-19 merupakan proses yang tidak terkecuali dialami oleh setiap individu, salah satunya yaitu tekanan akibat bencana alam dan konflik, namun yang membedakan antara individu yang satu dengan lainnya adalah pada keberhasilan individu dalam beradaptasi oleh tekanan-tekanan yang ada.

Rini (2016) berpendapat bahwa keadaan individu yang sedang mengalami kesulitan memang tidak dapat dihindari, namun individu yang memiliki resiliensi akan mampu mengatasi berbagai persoalan dengan cara mereka sendiri. Artinya adanya resiliensi akan mengubah persoalan yang sedang dialami menjadi sebuah tantangan, kegagalan menjadi kesuksesan, dan ketidakberdayaan menjadi kekuatan. Reivich dan Shatte (dalam Iqbal, 2011), menyatakan bahwa resiliensi adalah kemampuan untuk mengatasi dan beradaptasi terhadap kejadian yang berat dirasakan atau masalah besar yang terjadi dalam kehidupan.

Reivich dan Shatte (dalam Gunawan,2018) juga mengatakan bahwa faktor yang memepengaruhi terjadinya resiliensi ada dua yaitu faktor interal dan eksternal yang dimana faktor internal meliputi faktor individu yaitu harus adanya harga diri atau *self esteem*. Aspek lain yang dapat dikembangkan dari keterkaitan resiliensi adalah *self-esteem* dalam diri tiap individu. Menurut Coopersmith (dalam Gunawan,2018) berpendapat bahwa *self-esteem* mengacu pada suatu penilaian individu mengenai kelayakan dirinya dan menunjukkan sejauh mana individu percaya dirinya mampu, signifikan, sukses, dan berharga.

Berdasarkan hasil penelitian sebelumnya oleh Fasa (2019) menunjukkan bahwa resiliensi pada korban bencana masih rendah , hal tersebut ditandai karena tidak terpenuhinya aspek-aspek pembangun resiliensi. Lain penelitian oleh Hidayati (2014) mengenai hubungan antara *self esteem* dengan resiliensi pada remaja di panti asuhan yang menyatakan bahwa tingkat resiliensi remaja tergolong tinggi dan terdapat hubungan positif yang sangat signifikan antara *self esteem* dengan resiliensi .

Bertolak belakang dari hasil-hasil penelitian sebelumnya, Kaya (2007) dalam penelitiannya tentang hubungan *self esteem* dengan resiliensi pada siswa di Asrama Daerah Sekolah Dasar menunjukkan bahwa tidak ada hubungan yang signifikan antara *self esteem* dengan resiliensi karena siswa yang tinggal di asrama menghabiskan sedikit waktu mereka dengan keluarga mereka, menerima sedikit dukungan dari keluarga mereka yang menyebabkan *self esteem* mereka rendah walaupun resiliensi mereka tinggi.

Berdasarkan hasil wawancara yang dilakukan oleh penulis terhadap perawat petugas Covid-19 di RSU St. Elisabeth Semarang semakin bertambahnya jumlah pasie dan kurangnya fasilitas tempat untuk menampung pasien Covid-19 membuat rumah sakit swasta ini memberi kebijakan akan keharusan perawatnya mengurus pasien isolasi selama 24 jam. Kekurangan tenaga kerja, kelelahan kerja menjadi salah satu hal yang dikeluhkan oleh perawat disana. Bahkan kasus yang lain banyak juga perawat isolasi di RSU St. Elisabeth yang positif COVID-19, hal ini juga yang menjadikan ketakutan dan tekanan oleh perawat isolasi yaitu tertularnya akan virus COVID-19.

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Dari penjelsasan sebelumnya penulis merumuskan untuk mengetahui hubungan antara harga diri dan resiliensi pada perawat petugas Covid-19 di RS St Elisabeth.Semarang.

# Metode

Dalam penelitian ini peneliti menggunakan pendekatan kuantitatif dengan metode penelitian korelasional. Peneliti melakukan penelitian ini untuk mengetahui hubungan dan tingkat hubungan di antara *self-esteem* dengan resiliensi dalam diri perawat petugas Covid-19 RSU St. Elisabeth Semarang. Menurut Sugiyono (2011) penelitian kuantitatif merupakan sebuah peneltian dengan memperoleh data yang berupa angka atau data kuantitatif yang berkaitan dengan angka.

Variabel yang digunakan pada penelitian ini yaitu variabel bebas adalah harga diri dan variabel terikat yaitu resiliensi Penelitian ini dilakukan di RSU St. Elisabeth Semarang, subjek dari penelitian ini adalah para perawat petugas Covid-19. Pengambilan sampel ini menggunakan teknik sampel jenuh. Peneliti dalam hal ini mengambil semua sampel dari populasi para perawat yang menjadi petugas Covid-19 di RSU St. Elisabeth Semarang berjumlah 50 partisipan.

Instrumen yang dipakai dalam penelitian ini ada dua yaitu skala harga diri dan skala resiliensi. Kedua skala yang digunakan telah lolos melalui uji validitas dan reliabelitas dengan taraf kesalahan 5%. Pada skala harga diri terdapat 28 butir pertanyaan adapun memiliki nilai reliabilitas 0,928 dan hasil uji validitasnya 0,279. Selanjutnya untuk skala resiliensi yangg memiliki 20 butir pertanyaan menghasilkan nilai reliabilitas sebesar 0,947 dengan nilai validitas sebesar 0,279. Kedua instrumen ini menggunakan skala likert dengan susunan jawaban sangat tidak setuju, setuju, netral, tidak setuju dan sangat tidak setuju

**Hasil dan Pembahasan**

Penulis membahas tingkatan masing-masing variabel terlebih dahulu yaitu variabel harga diri dan variabel resiliensi. Setelah melalui tahap tersebut maka dilanjutkan denganuji asumsi yang meliputi uji normalitas, linieritas , uji hipotesis dan analisis regresi linier. Pada penelitian ini penulis menggunakan uji melalui SPSS 25.

Tabel 1 Hasil analisis Deskriptif

| VARIABEL | Mean | Median | Mode | SD | Variance | Range | Min | Max | Sum | KATEGORI |
|---|---|---|---|---|---|---|---|---|---|---|
| HARGA DIRI | 84 | 90 | 91 | 11 | 125 | 41 | 56 | 97 | 4215 | Tinggi |
| RESILIENSI | 116 | 124 | 126 | 16 | 254 | 60 | 74 | 134 | 5807 | Tinggi |

Berdasarkan data tersebut maka dapat disimpulkan bahwa harga diri / *self esteem* yang dimiliki perawat petugas Covid-19 di RSU St. Elisabeth Semarang berada di kategori tinggi. ada 0 orang dengan persentase 0%, skala tinggi ada 19 orang dengan persentase 38%, skala sedang ada 17 orang dengan persentase 34%, skala rendah ada 7 orang dengan persentase 14%, dan skala sangat rendah ada 7 orang dengan persentase 14%. Sedangkan variabel resiliensi juga berada di kategori tinggi karena mayoritas perawat memiliki resiliensi dengan skala tinggi. skala tinggi ada 23 orang dengan persentase 46%, skala sedang ada 13 orang dengan persentase 26%, skala rendah ada 9 orang dengan persentase 18%, dan skala sangat rendah ada 5 orang dengan persentase 1%. Maka disimpulkan harga diri dan resiliensi perawat petugas Covid-19 di RS St. Elisabeth Semarang berada pada kategori tinggi.

Selanjutnya melalui uji asumsi yang terdiri daari tiga tahap yaitu uji normalitas, uji linieritas dan hipotesis. Pada tahap uji normalitas penulis meggunakan teknik *Jarque Bera Test* untuk mengetahui normal atau tidaknya distribusi data pada masing-masing variabel. Uji normalitas *Jarque Bera Test* menggunakan perhitungan nilai *skewness* dan *kurtosis*. Jika nilai statistik Jarque Bera < Chi Square Tabel maka berkesimpulan data berdistribusi secara normal. Dalam uji kali ini ditemukan bahwa chi square tabel sebesar 1.708 dan hasil nilai statistik dari perhitungan rumus *Jarque Bera Test* sebesar - 0,845.

Berdasarkan hal tersebut, maka dapat disimpulkan bahwa variabel *penelitian* berdistribusi normal karena memiliki nilai - 0,845 < 1.708 atau sama dengan hasil nilai statistik *Jarque Bera Test* < chi square tabel.

Tahap kedua uji linieritas menggunakan ANOVA, kedua variabel bisa dikatakan linier apabila memiliki nilai signifikansi p>0,05. Pengujian liniearitas kedua variabel yang telah dilakukan menghasilkan nilai signifikansi 0,094 (p<0,05) yang berarti disimpulkan bahwa variabel resiliensi dengan *self esteem* memiliki hubungan yang sejajar atau linear. Selanjutnya uji hipotesis/korelasi yang menggunakan *Pearson Product Moment* didapatkan r = 0,934 dan skor signifikansi sebesar 0,000 (p<0,001) maka dapat dikatakan bahwa terdapat hubungan positif yang signifikan antara *self esteem* dan resiliensi pada perawat Covid-19 di RSU St. Elisabeth Semarang. Untuk mengetahui besarnya pengaruh keharmonisan keluarga terhadap kenakalan remaja dalam analisis regresi linier sederhana, dapat diketahui melalui tabel di atas bahwa nilai R Square sebesar 0,871. Nilai ini mengandung arti bahwa pengaruh *self esteem* terhadap resiliensi adalah sebesar 86%. Sedangkan 14% dipengaruhi oleh faktor lainnya.

**PEMBAHASAN**

Berdasarkan hasil uji hipotesis dengan *Pearson Product Moment,* didapat bahwa ternyata terdapat hubungan positif signifikan antara resiliensi dengan *self esteem* pada perawat petugas Covid-19 RSU St. Elisabeth Semarang. Hasil penelitian menunjukkan bahwa terdapat hubungan antara resiliensi dengan *self esteem*. Hal ini dikarenakan besar nilai r = 0,871 dengan sign = 0,000, sehingga didapat bahwa sign 0,000 (p < 0,05), sehingga terdapat hubungan positif yang signifikan antara resiliensi dengan *self esteem* siswa pada perawat petugas Covid-19 RSU St. Elisabeth Semarang . Sehingga hipotesis yang diajukan dalam penelitian ini diterima, artinya semakin tinggi *self esteem* maka semakin tinggi resiliensi individu tersebut, dan sebaliknya semakin rendah *self esteem* maka semakin rendah resiliensi individu

Hasil analisis deskriptif, menunjukkan bahwa *self esteem* pada perawat petugas Covid-19 RSU St. Elisabeth Semarang tergolong tinggi yaitu sebanyak 19 perawat (38%) dan sebanyak 17 perawat (34 %) berada pada kategori sedang. Begitu pula dengan resiliensi sebanyak 23 perawat (46%) dengan kategori tinggi dan pada kategori seadng sebanyak 13 perawat (26%). Sumbangan efektif dari *self esteem* terhadap resiliensi berpengaruh sebesar 86%. Sedangkan 14 % dipengaruhi oleh faktor lainnya yang artinya resiliensi dapat dikatakan sangat benrpengaruh penting terhadap *self esteem* tiap individu.

*Self esteem* dan resiliensi yang signifikan pada diri perawat petugas Covid-19 RSU St. Elisabeth Semarang didukung dengan penelitian yang dilakukan oleh Margareth (2016) yang menyatakan bahwa tingkat resiliesi dalam diri tiap individu saat mengalami pada kenyataannya dibarengi dengan aspek-aspek pendukung dalam diri individu, termasuk *self esteem* yang dimana ketika individu sedang mengalami kesulitan atau sedang mengalami bencana, jika memiliki *self esteem* tinggi maka individu juga memiliki resiliensi yang tinggi juga, begitu pun sebaliknya. Selain itu, penelitian ini juga didukung oleh Iqbal (2011) menyatakan bahwa adanya hubungan yang signifikan antara *self esteem* dengan resiliensi pada tiap individu, dimana jika individu tersebut memiliki *self esteem* yang tinggi maka resiliensinya akan tinggi. Penelitian mengenai hubungan *self esteem* dengan resiliensi juga pernah diteliti oleh Sari (2017) dimana adanya hubungan positif yang signifikan antara *self esteem* dengan resiliensi pada remaja di panti asuhan Pekanbaru.

Resiliensi sangat mempengaruhi perawat Covid-19 di dalam proses pekerjaannya, dikarenakan dalam proses merawat pasien Covid-19 perawat dituntut untuk memahami setiap pasien dan keluh kesah pasien, menyesuaikan setiap keadaan yang ada, dan proses interaksi dengan pasien. Sehingga dalam keadaan tersulit perawat dalam proses merawat pasien Covid-19, perawat diharuskan memiliki kemampuan dalam merespon keadaan sulit tersebut dengan cara menangani dengan benar dan tepat sesuai SOP yang ada walaupun para perawat tetap merawat pasien di masa pandemi. Reivich dan Shatte (2002) menyatakan terdapat 7 aspek resiliensi antara lain regulasi emosi, pengendalian impuls, analisis kausal, efikasi diri, optimisme, empati dan pencapaian. Dari ketujuh aspek tersebut sangat berpengaruh akan tinggi atau rendahnya suatu self esteem atau harga diri seseorang yang dimana aspek ini saling berhubungan dengan aspek self esteem menurut Coopersmith (dalam Mruk,2006).

Terdapat banyak kekurangan yang terjadi dalam penelitian ini, karena adanya wabah *covid-19,* peneliti memiliki keterbatasan dalam hal membagikan kuesioner kepada para perawat sehingga berakibat pada lamanya waktu pengambilan data. Karena penyebarannya pun secara *offline* atau dengan membagikan angket secara langsung dan cukup susah untuk membagikannya mengingat jam kerja

perawat Covid-19 yang berbeda dengan petugas lainnya. Dikarenakan masih masa pandemi peneliti juga belum dapat mengamati secara langsung bagaimana kondisi responden saat mengisi kuesioner berlangsung. Diharapkan untuk penelitian selanjutnya dapat lebih baik lagi dalam hal pembuatan penelitian dan kuesioner yang telah dibuat.

**Simpulan**

Berdasarkan hasil penelitian, maka dapat diambil beberapa kesimpulan bahwa terdapat hubungan positif antara resiliensi dengan *self esteem*. Ini terlihat dari hasil perhitungan SPSS yang menunjukkan signifikansi 0,934 atau lebih dari 0,05 (0,934 > 0,05) sehingga menunjukkan hasil yang signifikan. Resiliensi yang dimiliki oleh perawat petugas Covid-19 di RSU St. Elisabeth Semarang berada di kategori tinggi karena persentase perawat dengan kategori tinggi merupakan persentase yang tertinggi di antara semua kategori resiliensi perawat petugas Covid-19 di RSU St. Elisabeth Semarang.

*Self esteem*/ harga diri yang dimiliki perawat petugas Covid-19 di RSU St. Elisabeth Semarang berada di kategori tinggi, karena perawat petugas Covid-19 di RSU St. Elisabeth Semarang juga memiliki rata-rata *self esteem* berada pada tingkat tinggi. Sumbangan efektif/ analisis regresii linier variabel self esteem terhadap variabel resiliensi sebesar 86% sedangkan 14% dipengaruhi oleh faktor lainnya.

## Ucapan Terimakasih

Ucapan terimakasih ditujukan kepada para perawat petugas Covid-19 di RS St. Elisabeth Semarang yang telah membantu dalam penyelesaian penelitian ini.

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# Psychosocial Factors Associated With Resilience Among Iranian Nurses During COVID-19 Outbreak

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**Background:** In the face of COVID-19, healthcare workers need to cope with the ongoing stressors at play and keep psychological distress at a minimum level. This study examined the psychosocial and demographic factors associated with nurse's resilience in the hospitals of Ahvaz that is one of the top cities infected with COVID-19 in Iran.

**Methods:** The present cross-sectional study was conducted on 387 Iranian nurses in Ahvaz city. For data collection purposes, three online questionnaires (including Copenhagen Psychosocial, Demographic, and Connor–Davidson Resilience Scale) were distributed among the participants.

**Results:** The mean resilience score was equal to $61.8 \pm 14.8$ for 387 nurses. Resilience had a statistically significant negative correlation with quantitative demand ($r = -0.273$, $P < 0.008$), work pace ($r = -0.262$, $P < 0.011$), emotional demand ($r = -0.226$, $P < 0.030$), stress ($r = -0.458$, $P < 0.000$), and burnout ($r = -0.287$, $P < 0.005$). Multiple linear regression analysis indicated that stress, job satisfaction, burnout and age were the main predictors of nurses' resilience during the (COVID-19) pandemic ($R^2 = 0.45$).

**Conclusions:** We identified psychosocial and demographic predictive factors that may contribute to greater resilience among nurses during the COVID-19 outbreak. The findings of this study can be used to implement psychosocial interventions to amplify the resilience of medical staff during the COVID-19 outbreak.

**Keywords: psychosocial, stress, nurses' resilience, COVID-19, healthcare workers**

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## INTRODUCTION

Coronavirus disease (COVID-19) was first reported in Wuhan, China, in late December 2019 (1). The new coronavirus, the agent creating COVID-19 disease, is mostly transmitted via respiratory droplets by patients. Occupational exposure is one way through which the disease may be contracted and, thereby, many people are at risk of catching this disease due to their job nature. In this respect, nurses are at the frontline of controlling and treating this disease. Since this disease is highly contagious, nurses are more exposed to the risk of this disease. Hence, it can be argued that nursing is one of the high-risk occupations during the COVID-19 pandemic (2). According to recent studies, healthcare workers are more than 7-fold higher at risk of severe COVID-19 and be vectors of transmission.

In Iran, the first definitive disease infection case was reported on February 19, 2020. Within 10 days from the report of the first COVID-19 death case in Iran, this disease spread to 19 provinces

out of the 31 provinces of the country (3). The epidemiological studies conducted from January 30 to March 27, 2020, one of the hospitals in Tehran showed that 12,870 patients have been referred to the emergency ward of the hospital, out of whom 2,968 have been hospitalized with the diagnosis of COVID-19 (4). In a short time after being announced pandemic, many provinces in Iran reported healthcare services saturation because of severe care needs. In many provinces, the high rate of prevalence and mortality for the disease created a serious crisis (5).

The process of spreading this disease has been on the rise in Iran since its inception. Due to the lack of healthcare workers (especially nurses), personal protective equipment (PPE) and the prolonged use of PPE, high rates of physical and mental workload have been reported among the medical personnel during the COVID-19 pandemic (6). In addition to the high physical workload of healthcare workers, psychosocial risk factors, including a wide range of variables can influence their health, safety, and welfare. Such factors are widely in interaction with each other at the individual, collective, and organizational levels in a multidimensional manner. Therefore, considering the current situation resulting from this pandemic, healthcare workers are exposed to depression, anxiety, insomnia, and distress. In this regard, several cross-sectional studies have reported the prevalence of depression and anxiety symptoms among Chinese people during the COVID-19 pandemic (7–9).

In the face of COVID-19, one needs to cope with the ongoing stressors at play and keep psychological distress at a minimum level. When nurses work in such critical conditions and also experience high levels of stress and fatigue, resilience is the key factor that can help them cope with these conditions (10). Resilience assists people to return to the previous state or adapt successfully despite the existence of adverse conditions. This concept has been referred to as a multidimensional feature that helps a person successfully tackle the challenges ahead and enhances protection against stressful situations (11). Thus, the dominance of resilience among healthcare workers is important because measures of greater resilience have previously been connected to the lower levels of psychological and emotional distress and reduced adverse effects of stress on health-related life quality in different groups (12–15). Previous research findings strongly support the importance of resilience in the quality of working life in nurses (12); however, little is known about the factors associated with resilience in this population, especially during the COVID-19 pandemic. When different groups of employees and workers have information about the factors associated with resilience, they may know how to identify the possible methods of resilience promotion. This can be at play especially in the case of healthcare workers during the COVID-19 pandemic. According to psychologists, factors such as personality traits, family ties, and social systems amplify resilience (10).

This study attempts to provide nurses with a better perception of mental health by gathering data on resilience. To this end, a survey involving self–administered questionnaires was conducted to recognize a range of likely demographic and psychosocial factors associated with the higher or lower levels of resilience during the COVID-19 pandemic. The results of this study are expected to contribute to the identification of effective factors in enhancing resilience level among nurses and to the selection of appropriate strategies to manage the stress of dealing with the COVID-19 pandemic by hospital managers.

# METHOD

## Participants

In the present cross-sectional study, nurses who worked in hospitals affiliated to the University of Medical Sciences, Khuzestan province, Iran, were invited to participate in the research process. The qualified nurses were selected by census sampling from hospitals, from April to May 2020. There are 18 hospitals in the city of Ahvaz, of which, nine hospitals are affiliated to the university of Ahvaz medical science. Of these nine hospitals, four hospitals were designated as referral centers for patients with COVID-19.

The eligible nurses were selected by census sampling based on the inclusion criteria. The inclusion criteria were as follows: (a) having more than 1 year of clinical work experience (b) clinical work experience with patients with COVID-19 for more than 2 months. Since this study has been conducted during the COVID-19 pandemic, the questionnaires were made and sent to nurses online for data collection in order to reduce contact and face-to-face communication. All participating nurses signed a written informed consent form before participation, confirmed by the Ethics Review Committee of Ahvaz Jundishapur University of Medical Sciences (reference number IR.AJUMS.REC.1399.704).

## Survey Measures

### Demographic Questionnaire

The participants provided detailed information on a range of demographic items, including their age, gender, marital status, number of children, work experience, and education.

### Connor–Davidson Resilience Scale (CD-RISC)

Resilience was assessed using the Connor–Davidson Resilience Scale (CD-RISC). CD-RISC Scale contains twenty-five items that are graded based on a Likert scale from not true at all (0) to true nearly all of the time (4). Thus, the questionnaire score ranges from 0 (lower degree of resilience) to 100 (greater degree of resilience). Resilience is determined by a CD-RISC score higher than 80. In this regard, Connor and Davidson have documented the Cronbach's alpha coefficient of the Resilience Scale to be 0.89. Moreover, for this scale, the reliability coefficient of 0.87 has been reported (16, 17). The reliability of this scale in Iran has also been assessed and the Cronbach's alpha coefficient of 0.89 has been reported for it (18).

### Copenhagen Psychosocial Questionnaire (COPSOQ)

The second version of the Copenhagen Psychosocial Questionnaire was used to evaluate the psychosocial risk factors in this study. This questionnaire is one of the most comprehensive standard questionnaires that cover a wide range of psychological factors. Each scale is analyzed within the range of 0 to 100 where zero indicates the minimum degree of risk and 100 represents the maximum risk. The respondents to the COPSOQ are asked to respond to the questions using items on a

5-point scale, most of which are as A = Always, B = Often, C = Some, times, D = Seldom, and E = Never/Hardly or as A = To a very large extent, B = To a large extent, C = Somewhat, D = To a small extent, and E = To a very small extent. Based on the subjects' ratings, each item (scores A to E) scored 0, 25, 75, and 100, respectively, and the average score of the items on each of the factors determined the score of that factor. A lower rating for each of the factors indicates better and ergonomic psychosocial conditions of the work environment (19, 20). The reliability and validity of the Persian version of this questionnaire have been determined through Cronbach's alpha and the values of 0.75 and 0.89 have been reported for them (21).

## Statistical Analyses

Kolmogorov–Smirnov statistical test was run to examine the normality of data distribution. The results showed that all data had a normal distribution; thus, differences in resilience scores between demographic characteristics with healthcare workers were assessed using the independent-samples t- test and one-way ANOVA. Pearson correlation test was also used to examine the associations of resilience with demographic and psychosocial variables. Then, the factors influencing resilience were carried out using multiple linear regression.

# RESULTS

## Demographic Information

Out of the 699 questionnaires sent online, 387 questionnaires were filled out, which is representative of the return rate of 55%. The demographic information of the participants is given in **Table 1**.

## Psychosocial Factors

Psychosocial factors were investigated using COPSOQ. The results showed that quantitative demand, emotional demand, quality of leadership, work-family conflict, burnout, stress, and job satisfaction were the psychosocial factors with high scores. It was also revealed that the lowest mean score belonged to the role clarity (**Table 2**).

## Resilience

The mean score of 61 was determined for CD-RISC. It was also found that twelve percent of the study population had a high level of resilience (CD-RISC score > 80).

As shown in **Table 3**, participants with master's degree education had the highest resilience score in the study and there was a significant difference between participants with various levels of education in terms of resilience ($P = 0.03$). Based on the statistical analyses, a significant difference was observed between the female and male subjects with regards to the mean of resilience ($P = 0.03$). In this regard, the women had less resilience than men. Regarding work experience, people with more work experience had higher resilience and the difference in resilience was significant ($P = 0.01$) between various groups of work experience. Statistical analyses also showed that resilience is significantly different in various age groups ($P = 0.04$) and it increases with the increase of age.

## Factors Associated With Resilience

### Correlation Analysis

To investigate the correlation of resilience with psychological and demographic variables in the study participants, the Pearson correlation test was run. The results of this analysis are shown in **Table 4**.

The psychosocial factors were significantly correlated with resilience in three domains including, interpersonal relation and

**TABLE 1 |** Demographic information of the study participants ($N = 387$).

| Variable | Mean (SD) |
|---|---|
| Age (years) | 34.42 ± 8.35 |
| Work experience (years) | 8.31 ± 3.74 |
| Gender | *n* (%) |
| Female | 236 (61) |
| Male | 151 (39) |
| Marital status | *n* (%) |
| Single | 199 (51.4) |
| Married | 188 (48.6) |
| Education level | *n* (%) |
| Associate degree | 47 (12.1) |
| Bachelor degree | 198 (51.2) |
| Master degree | 142 (36.7) |
| Parent status | *n* (%) |
| Childless | 168 (43.4) |
| With child | 219 (56.6) |

**TABLE 2 |** Mean and Standard deviations of COPSOQ dimensions ($N = 387$).

| Dimension | Mean | ± SD |
|---|---|---|
| Quantitative demand | 62.3 | 20.7 |
| Work pace | 45.2 | 19.4 |
| Emotional demand | 65.9 | 23.5 |
| Influence | 39.8 | 19.8 |
| Possibilities for development | 44.7 | 21.5 |
| Meaning of work | 29.8 | 20.9 |
| Commitment to the workplace | 31.6 | 23.8 |
| Predictability | 48.2 | 21.6 |
| Recognition (reward) | 34.4 | 20.2 |
| Role clarity | 28.3 | 19.1 |
| Quality of leadership | 61.5 | 23.3 |
| Social support from supervisor | 44.1 | 19.9 |
| Job satisfaction | 67.6 | 20.8 |
| Work family conflict | 74.9 | 22.5 |
| Trust regarding management | 30.1 | 18.6 |
| Justice | 31.3 | 29.9 |
| General health | 50.2 | 25.2 |
| Burnout | 58.5 | 19.3 |
| Stress | 65.4 | 25.3 |

**TABLE 3 |** Comparison between demographic variables and the CD-RISC scores ($N = 387$).

| Variable | Connor–davidson resilience scale (CD-RISC) score | *P*-value |
|---|---|---|
| **Age groups (year)** | | |
| 23–30 | 59.54 (15.15) | 0.04** |
| 30–37 | 60.44 (14.71) | |
| 37–44 | 63.22 (13.24) | |
| 44–51 | 67.35 (14.24) | |
| **Work experience groups (year)** | | |
| 1–5 | 53.29 (15.1) | 0.01** |
| 5–10 | 60.12 (15.26) | |
| 10–15 | 61.27 (8.3) | |
| 15–20 | 67.73 (13.4) | |
| **Gender** | | |
| Female | 59.53 (14.9) | 0.03* |
| Male | 62.36 (14.46) | |
| **Marital status** | | |
| Single | 62.01 (13.7) | 0.34* |
| Married | 60.5 (15.73) | |
| **Education level** | | |
| Associate degree | 60.02 (12.6) | 0.03** |
| Bachelor degree | 61.67 (15.3) | |
| Master degree | 63.23 (13.42) | |
| **Parent status** | | |
| Childless | 62.339 (13.4) | 0.66* |
| With child | 60.36 (14.1) | |

**independent t-test.*
***One-way ANOVA.*

**TABLE 4 |** Correlation between resilience and the psychosocial and demographic factors ($N = 387$).

| Factors | *r* | *P*-value |
|---|---|---|
| **Demand at work** | | |
| Quantitative demand | −0.273 | 0.008 |
| Work pace | −0.262 | 0.011 |
| Emotional demand | −0.226 | 0.030 |
| **Interpersonal relation and leadership** | | |
| Quality of leadership | 0.219 | 0.036 |
| **Work individual interface** | | |
| Job satisfaction | 0.417 | 0.000 |
| **Health and well-being** | | |
| General health | 0.301 | 0.004 |
| Burnout | −0.287 | 0.005 |
| Stress | −0.458 | 0.000 |
| **Demographic** | | |
| Age | 0.304 | 0.003 |
| Education | 0.210 | 0.044 |
| Work experience | 0.226 | 0.030 |

**TABLE 5 |** Multiple linear regression model for resilience.

| | B | S.E | β | *P*-value |
|---|---|---|---|---|
| Coefficient | 43.813 | 7.320 | | |
| Stress | −0.244 | 0.038 | −0.528 | 0.000 |
| Job satisfaction | 0.191 | 0.065 | 0.234 | 0.004 |
| Burnout | −0.049 | 0.028 | −0.143 | 0.045 |
| Age | 1.544 | 0.859 | 0.144 | 0.076 |

*$R = 0.671$; $R^2 = 0.450$; Adjusted $R^2 = 0.425$.*

leadership, and work individual interface and health and well-being. As shown in **Table 4**, resilience had a positive correlation with the quality of leadership, job satisfaction, and general health. Therefore, resilience can be enhanced by improving the quality of leadership and job satisfaction and by reducing the quantitative and emotional demands of the job.

As shown in **Table 4**, those dimensions that had a statistically significant negative correlation with resilience included quantitative demand, work pace, emotional demand, stress, and burnout. This means that resilience is reduced with the increase of quantitative demand, work pace, emotional demand, stress, and burnout.

The results of correlation analysis demonstrated that age, an education level, and work experience were the demographic factors that had a statistically positive correlation with resilience.

### Multiple Linear Regression Analysis

In order to investigate factors affecting resilience, a multiple linear regression analysis was run. The results of this test showed that stress ($\beta = -0.528$, $P < 0.000$), job satisfaction ($\beta = 0.234$, $P < 0.004$), burnout ($\beta = -0.143$, $P < 0.045$), and age ($\beta = 0.144$, $P < 0.042$) were the psychosocial and demographic factors predicting resilience. According to the coefficient of determination ($R^2$), 45% of the resilience could be explained by these variables. The regression model has been presented in **Table 5**.

## DISCUSSION

In this study, several demographic and psychosocial factors involved with resilience among nurses during the COVID-19 pandemic were assessed. The most significant finding of this study was that resilience was related to stress, age, job satisfaction, and burnout.

### Demographic Factors and Resilience

The results of this study showed that the mean level of resilience in nurses was 61 during the COVID-19 pandemic, which was lower than that of medical staff who work in Radiology Departments (22). Also, the study carried out by Lin et al. on non-native nurses in Wuhan showed that the mean and standard deviation of nurses' resilience in COVID-19 pandemic conditions were equal to $64.86 \pm 13.46$ (23).

The present study indicated that the nurses' resilience level during the outbreak of COVID-19 was relatively low. Considering the multidimensional nature of resilience, it seems

that various factors, including different work environment conditions and existing psychosocial risk factors due to the prevalence of COVID-19 disease have influenced the mean score of nurses' resilience. Therefore, such issues have resulted in a decline in resilience among the nurses.

In terms of resilience in groups with various work experiences, age groups, and education levels, the current findings showed that resilience has experienced an increase with the increase of work experience, age, and education level. Resilience had a significant positive correlation with age, the level of education, and work experience. In this regard, Gillespie et al. assessed the degree of resilience among operating room nurses and reported that nurses' resilience increases with the increase in their experience and education level (24). Similarly, Ang et al. also showed that age and education degree have a significant correlation with resilience. There was a strong association between the highest educational degree and resilience level, and nurses with a bachelor or master's degree had moderate/high resilience three times as much as nurses with only a general nursing certificate (25). Similarly, the results of the study done by Hsieh et al. also maintained that education level is significantly correlated with resilience (26).

The increase of nurses' age, education, and work experience may lead to the progress of their skills with exposure to stress and the development of their abilities to cope with stressful and critical conditions. The progress of such skills helps with the development of different coping strategies, which can simplify their adaptation and provide them with the facility to act usefully and more resiliently in such conditions. Therefore, for increasing resilience in the medical personnel with a lower level of work experience and education, it is strongly recommended to provide them with the relevant training that can enhance their science and experiences in COVID-19 management and coping.

A previous study showed that resilience in female personnel was significantly lower than that in male personnel. The study carried out by Dai et al. showed that a significant difference between male and female medical personnel in terms of the degree of concern about the development of infection among their family members during the COVID-19 pandemic (27). The reason may be attributable to the natural differences between the males and females in their perspectives and methods of looking at critical situations. Women are more sensitive and their anti-stress capability is also relatively weak and, thereby, they suffer from a sense of insufficiency for psychological compatibility. Therefore, more attention and psychosocial support should be assigned to female nurses.

The groups with different marital statuses were not significantly different in terms of resilience. However, the nurses without any children had a higher level of resilience. In fact, the sense of responsibility to the family members is believed to play a significant role in decreasing nurses' resilience during the COVID-19 pandemic. This finding is similar to the results of a study reported by Hsieh et al. (26). The results of a study by Guo et al. also showed that marital status was not associated with resilience (14).

## Psychosocial Factors Associated With Resilience

The most important psychosocial risk factors identified in the current study included work-family conflict, stress, emotional needs, burnout, job satisfaction, and the quality of leadership. In the same vein, Fathi et al. also showed that emotional needs, stress, depression, and anxiety are among the challenges that the healthcare workers might face during the COVID-19 pandemic (28). The results of a similar study conducted by Freimann T & Merisalu demonstrated that work-related psychosocial factors, including quantitative demands, emotional needs, work speed, and role conflict are related to nurses' mental health and these psychosocial factors can produce stress and job burnout among nurses (29). In addition, the results of this study showed that quantitative demand, work pace, emotional demand, stress, and burnout were negatively correlated with resilience in such a way that the increase in the identified negative factors would cause a reduction in resilience among individuals.

Hernandez et al. assessed resilience among medical technicians and reported that resilience has a negative correlation with stress (30). In this regard, prior studies have found that stress, burnout, and fatigue are negatively associated with resilience (11, 31–33). Thus, to increase resilience among nurses, one needs to consider these psychological factors, especially when being involved in a stressful situation arising from unknown diseases.

Work-family conflict was recognized as one of the most important psychosocial risk factors in the present study. In this line, the results of a qualitative study on healthcare workers in Iran showed that conflict with family members is one of the important psychosocial factors for healthcare workers in the COVID-19 pandemic where the majority of families have opposed the presence of healthcare workers at their workplace (28). The results of other studies on psychological factors in the H1N1 pandemic have also suggested that the greatest concern of the healthcare workers was the possible infection of their family members and friends and the health consequences of the disease. This process has led to work-family conflict (34, 35). Thus, training the families and provision of social support in critical conditions can moderate work-family conflict as a psychosocial risk factor affecting resilience.

Another important result of this study was the significant and positive correlation between the quality of leadership and resilience in nurses. The managers of hospitals and wards can exert an important role in providing the necessary conditions for nurses to improve the level of resilience. For example, hospital administrators could implement a training intervention that provides medical personnel with information about the condition of the pandemic exposure and prevention of infectious diseases. These measures may decrease the harmful stress-related effects of exposure to covid-19, thereby, improving their resilience.

A large number of patients, long working hours, and the definition of new roles for nurses in the COVID-19 pandemic conditions lead to an increase in the quantitative and qualitative demands at work that require accurate management and social support. Wang et al. have also emphasized that social supports

are related to nurses' resilience (36). Thus, understanding the importance of this issue by managers and improving the quality of management and social support help with the improvement of nurses' resilience. The results of the current study showed that job satisfaction and general health were positively correlated with resilience. Similarly, other related studies have indicated the presence of a significant positive relationship between job satisfaction and resilience (37–39).

In the present study, the results of regression analysis on psychosocial and demographic factors showed that job satisfaction, stress, job burnout, and age have an important role in predicting nurses' resilience level in the COVID-19 pandemic. Indeed, nurses' resilience is negatively associated with job demand, including stress and burnout. These findings emphasize the importance of psychosocial factors in nurse resilience, especially in the COVID-19 pandemic. Therefore, identifying and modifying the factors affecting nurses' resilience in stressful conditions such as pandemics can lead to an increase in resilience. In general, the current findings represent that resilience in nurses can be strongly influenced and maintained by suitable organizational strategies and preventive planning during the prevalence of COVID-19.

### Limitations

In this study, only healthcare workers were assessed. Due to the location and time limitations, this study surveyed only end-point resilience among nurses. Future studies are therefore suggested to employ a longitudinal design study to determine the changes in resilience during the covid-19 pandemic.

## CONCLUSION

Our paper is the first study that examines the resilience levels of nurses during the outbreak of COVID-19 by exploring associations between resilience and psychosocial factors highlighting important associated risk factors to propose suggestions for amplifying resilience of medical staff during the COVID-19 outbreak. The results of the present study showed that the resilience level of nurses during the outbreak of COVID-19 was low. Thus, the identification of the factors affecting resilience in pandemic conditions and the adoption of related corrective measures are regarded as effective steps to support nurses at the frontline of the fight against this disease. Based on the results of the study, the psychological and demographic predictive factors on resilience, including stress, job satisfaction, burnout, and age should be considered to boost nurses' resilience. In addition, more attention should be paid to other variables that may influence resilience, including education level, work experience, quantitative demand, work pace, emotional demand, quality of leadership, and general health. In general, the findings of this study indicate that the resilience of nurses can be heavily influenced and maintained by the establishment of proper organizational strategies and pre-emptive planning during the outbreak of COVID-19. The information of this study can be used to implement psychosocial interventions to amplify the resilience level of medical staff during the COVID-19 outbreak.

## DATA AVAILABILITY STATEMENT

The original contributions presented in the study are included in the article/supplementary material, further inquiries can be directed to the corresponding author/s.

## ETHICS STATEMENT

The studies involving human participants were reviewed and approved by IR.AJUMS.REC.1399.704. The patients/participants provided their written informed consent to participate in this study.

## AUTHOR CONTRIBUTIONS

All authors made contributions to the study conception and design, made contributions to the interpretation of data. In addition, they also contributed to the drafting and revision of the article as well as approval and, submission of the final version.

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# Resilience of nurses in isolation wards during the COVIDS19 pandemic: a cross-sectional study

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**ABSTRACT**

Impact of supportive interventions on resilience and self-assessed psychopathology symptoms of 92 nurses in isolation ward during the COVID-19 pandemic was evaluated. Resilience and psychopathological symptoms of nurses in the isolation ward was assessed by Connor-Davidson Resilience Scale (CD-RISC) and the Symptom Checklist 90 (SCL-90). A total resilience score was 87.04 ± 22.78. The SCL-90 score was 160- to 281 (202.5 ± 40.79). Only 8.70% of the nurses (n = 8) had a total SCL-90 score >160, suggesting positive symptoms. The majority of nurses had 0 to 90 positive self-assessment items (median 14); 19.57% (n = 18) had > 43 positive items. Interpersonal sensitivity, depression, hostility, and paranoid ideation scores were below national averages (p=0.000, 0.040, 0.002, 0.004, respectively). SCL-90 items reflecting diet and sleep conditions were higher(P = 0.009), and somatization, obsessive-compulsive, anxiety, phobic anxiety, and psychoticism domains and scores were similar to national averages (P>0.3). With exception of somatization and other domains, the mean resilience score was negatively associated with the scores of other SCL-90 domains. High resilience promotes physical and mental health, and may be improved by training, psychological interventions and full use of hospital resources

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COVID-19; resilience; scl-90

## Introduction

Disasters, such as earthquakes and major public health events, often have a significant impact on rescue workers, such as medical staff and policemen, and require their psychological adjustments. In December 2019, cases of pneumonitis of a new type of coronavirus infection (COVID-19) appeared in the Hubei Province, in China. It has since then spread rapidly in many countries and regions around the world, forcing the World Health Organization (WHO) to announce a COVID-19 pandemic on March 11 of 2020. Studies have shown that nurses working in Hubei during the initial epidemic had various levels of psychological stress reactions (such as tension, anxiety, and fear), but were able to adjust continually to the difficult and changing conditions (Jiang & Tan, 2020; Liu et al., 2020; M. Xu & Zhang, 2020).

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From January 2020 until the publication of this paper, our hospital in the Guangdong Province (a designated treatment hospital for patients with COVID-19) has actively prepared to better respond to the epidemic situation and successfully treated most of the confirmed patients in our region. We have been applying pre-test triage, triage, inspection, diagnosis, treatment, nursing and other interventions. Before entering isolation wards, our nurses received special training as well as psychological support interventions during their work in the isolation wards. Moreover, the work of all medical staff was supported with resources from family, hospital, government departments, and society. The main goal of this study is to investigate the psychological status of nurses in the isolation ward and assess the impact of hospital support interventions on their psychological symptoms.

## Materials and methods

The Ethics Committee of Jiangmen Central Hospital, Affiliated Jiangmen Hospital of Sun Yat-Sen University approved this study.

## Study participants

The study included nurses working in an isolation ward in our hospital during the epidemic. The nurses were licensed and their participation in the study was voluntary. We excluded nurses working in the isolation ward for less than 1 week or those refusing to participate.

We included 92 nurses by convenient sampling, starting from the month of February-2020. The group of nurses comprised 85 women (92.4%) and 7 men (7.6%) with ages ranging from 23 to 57 years (30.48 ± 6.37). In terms of their marital status, 47 nurses were single (51.1%), 42 married (45.7%), and 3 divorced (3.3%). Thirteen nurses (14.1%) had work experiences of less than 3 years, 21 (22.8%) of 3–5 years, 31 (33.7%) of 5–10 years, and 27 (29.3%) over 10 years. Nineteen nurses (20.7%) had junior or lower professional titles, 71 (77.2%) had intermediate, and two (2.2%) had senior titles. Nine nurses (9.8%) worked at intensive care units, 23 (25.0%) at infectious diseases wards or fever clinics, and the remaining 60 (65.22%) came from general departments such as surgery and internal medicine. During the outbreak, 28 nurses (30.43%) had been in the ward for less than 2 weeks; 48 nurses (52.2%) worked for more than 2, but less than 4 weeks; and sixteen (17.4%) worked for more than 1 month in the ward.

## Methods

We designed a cross-sectional study using a questionnaire to gather demographic data of the nurses. Connor-Davidson Resilience Scale (CD-RISC) (Chinese version) was used to assess the level of resilience of the participants and the Symptom Checklist 90 (SCL-90) to collect psychopathological symptoms. The investigation was conducted using the WJX.cn, an online questionnaire, assessment, and voting platform. The investigators provided nurses with instructions on completing the questionnaires. The questionnaire was set to have to be completed before submission. The nurses logged into the platform by scanning a QR code provided by the investigators and before responding to the questions. Data were then collected and extracted through the WJX.cn background. Two researchers verified completeness and analyzed the data.

## Instrument

The Connor-Davidson Resilience Scale (CD-RISC) is widely used for assessing resilience. It was translated and revised into a Chinese version by (Xiaonan Xiaonan Yu & Zhang, 2007) and is widely used in China. The 25-item Chinese version covered three dimensions: tenacity with 13 items (calmness, steadfastness, responsiveness, sense of control when facing challenges, etc.), strength with 8 items (not only recover from setbacks but also develop and grow, etc.) and optimism with 4 items (have confidence to overcome adversity, have a positive perspective, etc.). Participants rated items on a 5-point Likert scale (0 = not at all, 1 = rarely true, 2 = sometimes true, 3 = often true, 4 = extremely true) with a total score of a100 points (higher scores indicate higher resilience levels). The scale is not subjected to a normal model, three factors and the total score can be divided according to the item's average division: 0 to 0.99 is classified as a low level, 1 to 1.99 as a relatively low level, 2 to 2.99 as an intermediate level, and 3 to 4 as a high level. The scale's Cronbach's α coefficient was 0.928 in a related nurse study in China (K. Xu, 2017) and 0.90 in our study.

Chinese version of the Symptom Checklist 90 (SCL-90) was used to collect data on the psychological symptoms of the nurses (X. X. Wang et al., 1999). This commonly used scale assesses somatization, obsessive-compulsive behavior, interpersonal sensitivity, depression, anxiety, hostility, phobic anxiety, paranoid ideation, psychoticism, and other items rated on a 5-point Likert scale (0 = never, 1 = few events, 2 = somewhat frequently, 3 = often, 4 = many events) with a higher total score reflecting more severe symptoms. The score was considered positive for psychopathological symptoms if it was higher than 160 points, if the number of positive items was more than 43, or if any factor score was higher than 2 points. The Cronbach α in the study was 0.91.

## Intervention

A psychological intervention team including clinical psychology professionals from the Psychology Department was established when the isolation ward began to accept confirmed or suspected COVID-19 cases. The team attended to the staff members in the isolation ward, addressing their psychological problems and emotions. Each medical staff member completed a psychological test before beginning work in the ward and the psychological intervention was based on individual test results. The intervention included interviews, one-on-one communications, case management discussions, video lectures, and others. Additionally, the medical staff had psychological training to improve their psychological counseling skills to be able to better handle psychological problems of their patients. The psychological intervention team also offered psychological help to the families of the medical staff.

Training on personal protection, guidelines for prevention, and control of hospital-acquired infections was essential for all nurses since 75.0% of them came from other departments, such as surgery or internal medicine, and lacked specific knowledge. The hospital developed guidelines requiring every nurse who entered the ward to receive complete training. The Infection Control, Nursing, Infectious Diseases and Fever Clinic departments were responsible for this training task. The training content included COVID-19 diagnosis and treatment guidelines, personal protection, guidelines for

prevention and control of hospital-acquired infections, operating procedures, and others. The nurses were allowed to work in the isolation wards only after passing the training exams. The nurses learned the updated guidelines and procedures to master the latest information uploaded to the e-learning system in their own time.

The rational use of resources is of utmost importance during an epidemic. The personnel in the isolation ward, fever clinic, and pre-test triage area had priority access to personal protective materials and had to abide strictly to the personal protective equipment guidelines. The administrative departments of the hospital, such as the Equipment, Logistics, and Labor Union departments all cooperated closely to provide a good working environment for frontline personnel. The Nursing Department implemented flexible shifts according to work intensity to ensure adequate rest for the staff and established a support team to protect the manpower of the ward.

## Statistical analysis

Data were analyzed using the SPSS 19.0 software. T-tests were used for continuous data, and Chi-squared tests were used for categorical data. We assessed the correlation between resilience and SCL-90 using a Person correlation analysis, and considered all $P < 0.05$ as statistically significant.

## Results

The average scores of the three dimensions (tenacity, strength, and optimism) and the total resilience scores were all greater than 3, indicating a high level of psychological resilience Table 1.

The comparison of our nurses' resilience scores with those of 2239 nurses in Chongqing (K. Xu, 2017) showed that the total resilience scores and the tenacity, strength, and optimism scores in our study were significantly higher than the scores in Chongqing (see Table 2).

As indicated by SCL-90 scores, the average score of 10 dimensions was less than 2 indicating the presence of few psychopathological symptoms study. Eight nurses (8.70%) had total SCL-90 scores higher than 160 (ranging from 160 to 281 [202.5 ± 40.79]) suggesting the presence of positive symptoms. The self-assessed positive items of these nurses ranged from 0 to 90, with a median of 14 items, and with 18 nurses (19.57%) reporting more than 43 positive items. The positive items represented mostly the obsessive-compulsive dimension (item score≥2). The resilience scores were negatively correlated with other dimensions (except the somatization dimension and other items) such as the obsessive-compulsive, interpersonal sensitivity, and depression dimensions ($p < 0.05$) Table 3.

**Table 1.** Resilience scores of nurses (n = 92).

| Dimension | Range | X ± S (Total) | X ± S (Average) |
|---|---|---|---|
| Tenacity | 13.00–65.00 | 43.97 ± 12.43 | 3.38 ± 0.96 |
| Strength | 8.00–40.00 | 29.65 ± 7.32 | 3.71 ± 0.91 |
| Optimism | 4.00–20.00 | 13.42 ± 3.92 | 3.36 ± 0.98 |
| Resilience Scores | 25.00–125.00 | 87.04 ± 22.78 | 3.48 ± 0.91 |

**Table 2.** Comparative analysis of nurses' resilience scores.

| | Resilience Scores | Tenacity | Strength | Optimism |
|---|---|---|---|---|
| This study (n = 92) | 87.04 ± 22.78 | 43.97 ± 12.43 | 29.65 ± 7.32 | 13.42 ± 3.92 |
| Xu et al., 2017(K. Xu, 2017) (n =, p. 2239) | 63.87 ± 12.96 | 31.88 ± 7.28 | 22.32 ± 4.66 | 9.67 ± 2.40 4 |
| t Values | 9.76 | 9.33 | 9.61 | 9.19 |
| P Values | 0.000 | 0.000 | 0.000 | 0.000 |

**Table 3.** SCL-90 results (n = 92).

| Dimension | Range | Mean ± SD (Total) | Item score ≥2 [n (%)] | Correlation Coefficient with Mental Elasticity | P value |
|---|---|---|---|---|---|
| Somatization | 12.00–41.00 | 17.12 ± 6.38 | 15 (16.30) | −0.159 | 0.129 |
| Obsessive-Compulsive | 10.00–36.00 | 16.73 ± 6.49 | 27 (29.35) | −0.261 | 0.012 |
| Interpersonal Sensitivity | 9.00–31.00 | 12.54 ± 4.99 | 15 (16.30) | −0.346 | 0.001 |
| Depression | 13.00–55.00 | 17.85 ± 7.61 | 12 (13.04) | −0.286 | 0.006 |
| Anxiety | 10.00–34.00 | 13.86 ± 5.11 | 11 (11.96) | −0.260 | 0.012 |
| Hostility | 6.00–18.00 | 7.83 ± 2.74 | 10 (10.87) | −0.259 | 0.013 |
| Phobic Anxiety | 7.00–23.00 | 8.80 ± 3.30 | 7 (7.61) | −0.256 | 0.014 |
| Paranoid Ideation | 6.00–18.00 | 7.68 ± 2.90 | 11 (11.96) | −0.248 | 0.017 |
| Psychoticism | 10.00–29.00 | 12.61 ± 4.64 | 8 (8.70) | −0.274 | 0.008 |
| Additional Items | 7.00–27.00 | 11.51 ± 4.65 | 27 (29.35) | −0.110 | 0.295 |
| **SCL-90 Score** | 90.00–281.00 | 126.53 ± 44.20 | – – | −0.271 | 0.009 |

**Table 4.** Comparison of our nurses' SCL-90 scores (n = 92) with those of national means.

| Dimension | mean SD (Average) | National Norms | t value | P value |
|---|---|---|---|---|
| Somatization | 1.43 ± 0.53 | 1.37 ± 0.48 | 1.02 | 0.310 |
| Obsessive-Compulsive | 1.67 ± 0.65 | 1.62 ± 0.58 | 0.78 | 0.437 |
| Interpersonal Sensitivity | 1.39 ± 0.55 | 1.65 ± 0.61 | −4.43 | 0.000 |
| Depression | 1.37 ± 0.59 | 1.50 ± 0.59 | −2.08 | 0.040 |
| Anxiety | 1.39 ± 0.51 | 1.39 ± 0.43 | −0.08 | 0.938 |
| Hostility | 1.30 ± 0.46 | 1.46 ± 0.55 | −3.27 | 0.002 |
| Phobic Anxiety | 1.26 ± 0.47 | 1.23 ± 0.41 | 0.57 | 0.573 |
| Paranoid Ideation | 1.28 ± 0.48 | 1.43 ± 0.57 | −2.96 | 0.004 |
| Psychoticism | 1.26 ± 0.46 | 1.29 ± 0.42 | −0.60 | 0.548 |
| Additional Items | 1.64 ± 0.66 | 1.46 ± 0.55 | 2.66 | 0.009 |
| SCL-90 Score | 1.41 ± 0.49 | 1.44 ± 0.43 | −0.67 | 0.507 |

Compared with the national averages (Jin et al., 1986, p. 90), the interpersonal sensitivity, depression, hostility, and paranoid ideation dimensions had lower scores in study participants (p values at 0.000, 0.040, 0.002, and 0.004, respectively). However, additional items dimension had a higher score (p = 0.009), which may reflect diet and sleep condition differences. We found no statistically significant differences in terms of the somatization, obsessive-compulsive, anxiety, phobic anxiety, and psychoticism dimensions and the total SCL-90 score, after comparing our values to those of national averages Table 4.

## Discussion

Studies have found that epidemic of infection diseases may lead to increased incidence of, depression, neurasthenia, fear, compulsive-anxiety, and suspected disease-related symptoms (X. X. Zhang, 2015) in front-line medical workers. During the COVID-19

pandemic, medical staff working in isolation wards or fever clinics showed levels of psychological stress different from those working in medical or surgical wards (Jiang & Tan, 2020; Liu et al., 2020; Y. Y. Wang et al., 2020; M. Xu & Zhang, 2020; Y. Y. Zhang et al., 2020). Nurses come face-to-face with patients during treatment, examination and general care, and bear high-intensity workloads and performance pressure. This can lead to unique psychological problems in nurses as compared to physicians. Cai et al. found that 87.5% of the clinical front-line medical staff presented psychological problems after the first week participating in the COVID-19 rescue efforts at Hubei (Cai & Yuan, 2020). Xu et al. investigated the psychological status of nurses recruited from other wards to work as first-line clinical responders for the COVID-19 fight and found that 85.37% of them developed psychological problems within the first 2 weeks (total SCL-90 scores at 142.88 ± 13.48) (M. Xu & Zhang, 2020). In addition, many nurses had mean item scores higher than 2, 51.22% of them for the phobic anxiety dimension, 39.02% for the anxiety dimension, and 26.83% for the interpersonal sensitivity dimension (M. Xu & Zhang, 2020). In our study, the total SCL-90 score was 126.53 ± 44.20, and the average item scores were similar to the national averages ($p = 0.507$), as was the case in a study by Jiang et al. (Jiang & Tan, 2020). Our study also demonstrated that the interpersonal sensitivity, depression, hostility, and paranoid ideation scores were lower than national averages. Our results are in agreement with the previous study by Jiang et al. that demonstrated that the scores for interpersonal sensitivity, hostility and phobic anxiety among first-line nurses treating COVID-19 patients were similar, and scores for obsessive-compulsive, depression, paranoid ideation and psychoticism symptoms were lower than the national averages (Jiang & Tan, 2020). Together, these findings indicate a healthy psychological status for nurses in China. This may be due to the recruitment of nurses for the isolation wards. In our study, in addition to the nurses originally working in the Department of Infectious Diseases, 65.22% of the nurses came from other wards. However, all of them applied to enter the isolation ward during the outbreak on their own initiative, conscious of the work they were facing. This may explain why the overall SCL-90 scores and most item scores were similar or better in the participants of this study compared to the general population. Our descriptive analysis suggests, therefore, that maintaining a good psychological condition is important. Our results are in contrast to the result of Wang et al. that showed higher scores for somatization, obsessive-compulsive, depression, anxiety, phobic anxiety and psychoticism symptoms in medical staff, compared to the national averages (Y. Y. Wang et al., 2020). This discrepancy may be due to regional differences in the incidence of critical illness rates, resulting in different work and mental stresses faced by nurses.

Resilience depends on adaptation efforts (Sturgeon & Zautra, 2010), and is affected by a variety of factors, such as marital status, years of work, and others. Individuals with good resilience are more likely to adopt proactive ways to deal with problems when coping with difficulties (Kumpfer, 2002). Therefore, resilience is an essential skill that may help medical professionals to effectively adjust to and recover from physical and psychological damage, and to quickly adapt to work-related pressure. Studies have shown that resilience may affect different personal characteristics or indicators (H. Wang, 2019; J. J. Zhang et al., 2019) such as self-esteem, fatigue, psychological statuses (depression) (K. Xu et al., 2019), and overall physical and mental health (Ding et al., 2017; Smith & Yang, 2017). Several studies have

shown nurses displaying low resilience (Leng et al., 2020; Peng et al., 2017; K. Xu et al., 2017). In contrast, our study indicates resilience scores of 87.04 ± 22.78, markedly higher than the results of previous studies. As suggested by (K. Xu, 2017), psychological resilience in nurses may be promoted by 5 individual internal factors (ability, effective response, self-regulation, high professional identity), social support (family, friends, and colleagues), and work environments (effective safety, welfare benefits, and job stability) may promote psychological resilience in nurses (K. Xu, 2017). Moreover, good psychological statuses in nurses correlates with the successful past public health emergency experiences (Liu et al., 2020; M. Xu & Zhang, 2020). In our study, the nurses were willing to take part in the anti-COVID-19 campaign, and some of them had cared for patients with SARS, H7N9, or H1N1 in the past.

In our study, resilience was negatively associated with most of the SCL-90 dimensions. Improving the resilience of nurses can, therefore, reduce psychological symptoms such as anxiety, depression, and interpersonal sensitivity. Resilience is an individual skill that can be promoted and improved through training (XN XN Yu & Zhang, 2005; A. A. Zhang, n. d.). Zhang's Resilience Enhanced Model proposed that resilience may be improved by enhancing protective factors (improving self-efficacy, maintaining a positive coping style, enhancing social support, and making full use of hospital health resources) (A. A. Zhang, n.d.). In the recent study by Bao et al. of 45 nurses working in isolation wards in Hubeipsychological interventions, such as 'Narrative Nursing were shown to effectively lessen psychological symptoms' (Bao et al., 2020). Managers need to decide how to efficiently use the existing resources and provide the best support for medical staff, taking into consideration that specific needs may change over the course of the pandemic. However, before recent COVID-19 pandemic, evidence base in the area of supporting nurses practically and psychologically was weak, and mostly based on observational research (Billings et al., 2020). In a recently published review by Maben and Bridges (Maben & Bridges, 2020), authors give a detailed description of strategies and interventions that can be used to support nurses' psychological well-being during the COVID-19 crisis. This may include team and peer support, well-being checks, weekly review meetings, using stress response curves and stress first aid model as an early intervention approach.

Another study by Chen et al. (2020) addresses a need for continuous support for nurses outside of work, that may include providing a place to rest, guaranteed food and supplies, a way to stay in contact with families, as well as regular visits from psychological counsellors to listen to staff difficulties and stories and provide support (Chen et al., 2020). Public opinion also plays an important role by maintaining a positive mental state of resilience and reducing the negative psychological symptoms of nurses. All these measures may further promote resilience and ensure psychological well-being of front-line nurses.

In conclusion, the psychological status of nurses during epidemic may affect the quality of their work and worsen public health problems. Resilience in nursing and medical personnel may play a protective role. Training, psychological interventions, and judicious use of resources may all promote resilience of the medical staff. Further studies are needed to explore the specific influencing factors and interventions that promote psychological resilience.

## Disclosure statement

No potential conflict of interest was reported by the authors.

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# COVID-19: Risk Factors and Protective Role of Resilience and Coping Strategies for Emergency Stress and Secondary Trauma in Medical Staff and Emergency Workers—An Online-Based Inquiry

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**Abstract:** The COVID-19 crisis has placed a heavy burden on medical staff and emergency workers, who may be at risk of developing psychological distress and secondary trauma. Coping and resilience to stress during a pandemic are protective factors that can mitigate the potential adverse psychological effects. Here, we investigated the direct and mediated effects of coping strategies and hardiness on secondary trauma among Italian medical staff (physicians and nurses, $n$ = 140) and emergency workers (firefighters, civil protection, and ambulance personnel, $n$ = 100) involved in the first phase of the pandemic. For this purpose, we collected data from participants through online questionnaires to measure emergency stress, coping strategies, hardiness, and secondary trauma. Other variables analyzed were age, sex, direct contact with COVID-19 patients, and use of personal protective equipment (PPE). We performed a correlational analysis, regressions, and a mediation analysis. The results show that nurses and physicians experienced higher levels of emergency stress than emergency workers. Direct contact with COVID-19 patients, female sex, unexpected events, and lack of PPE were risk factors for emergency stress, while resilience and coping strategies played a protective role. Mediation analysis shows that coping strategies and hardiness are protective factors and reduce the effect of stress on secondary trauma.

**Keywords:** emergency stress; coping strategies; resilience; COVID-19; secondary trauma; risk factors; healthcare and emergency workers

## 1. Introduction

The emergency situation linked to the COVID-19 pandemic required many health and emergency workers to guarantee protection, treatment, and safety measures for people who had contracted the virus and to limit the spread of the infection. Starting with phase 1 of the pandemic in Italy, medical staff and emergency workers (such as ambulance personnel, civil protection staff, and firefighters) had to complete grueling work shifts that were long and full of tension, facing both objective and emotional difficulties. During the first weeks of the pandemic, clear intervention protocols, adequate instruments, and the necessary personal protective equipment (PPE) were lacking. These objective difficulties were coupled with psychological difficulties linked to the fear of contracting the virus, infecting one's family members, and, above all, to one's sense of helplessness in the face of patient losses.

According to Folkman and Lazarus [1], stress tends to be associated with the risk of developing symptomatic manifestations when external demands are perceived as outweighing one's resources and coping skills. Previous studies conducted on healthcare workers involved in the SARS and MERS pandemics have found high levels of stress associated with other psychopathological manifestations,

such as anxiety, depression, and secondary trauma [2–5]. The high stress associated with post-traumatic symptoms tends to impact the sense of gratification in one's work and the loss of the ability to cope with difficulties and resistance.

Repeated exposure to unpredictable challenges at work, such as the COVID-19 emergency, can cause symptoms of anxiety, exhaustion, and stress in healthcare professionals (medical staff, nurses, and assistants), and can lead to the development of secondary trauma (ST). ST is an emotional response or tension due to treating those suffering from the consequences of traumatic events and is different from the primary post-traumatic stress disorder that may be diagnosed in an individual who has experienced a traumatic event. Medical staff and emergency workers are generally more at risk of developing secondary than primary trauma [6].

Several studies conducted during the COVID-19 epidemic have already highlighted the presence of high levels of psychopathological symptoms in medical staff and the prevalence of secondary trauma [7–11]. Arpacioglu et al. [7] highlighted that the secondary traumatization of healthcare workers working directly with COVID-19 patients should be taken into consideration.

In medical staff members treating COVID-19 patients, anxiety levels affected psychological well-being by increasing levels of distress and decreasing sleep quality and self-efficacy [12–14].

Other studies have indicated that among healthcare professionals, women report higher levels of ST than men, in line with previous research on sex and the most recent studies on pandemics in Italy [15], and that ST negatively impacts the mental health of healthcare professionals in terms of both anxiety and depression [6]. However, only a few studies have also included emergency workers, who have played a fundamental role in the management of the COVID-19 pandemic. Vgni et al. [16] compared the levels of stress and ST in a group of healthcare and emergency workers, noting that compared with the emergency worker group, the healthcare worker group had higher levels of emergency stress and arousal.

### *1.1. Risk Factors of Mental Health Outcomes in Healthcare and Emergency*

Among the risk factors of developing psychopathological symptoms during the COVID-19 emergency, the literature highlights some sociodemographic variables, such as female sex [10,13,16–19]. Women tend to have higher fear and perception of the risk of infection, and this increases their risk of developing anxiety and distress [14]. Being in direct contact with COVID-19 patients also represents a risk factor for developing psychopathology. Some studies found that frontline healthcare workers had higher secondary traumatization scores than non-frontline health workers [10,13,20,21]. According to a review on the subject [18], the evidence suggests that female nurses with direct and close contact with COVID-19 patients may be at higher risk of adverse mental health outcomes during this pandemic.

Several studies have revealed that insufficient instruction and lack of personal protective equipment (PPE) are important predictors of stress for healthcare and emergency workers dealing with the COVID-19 emergency [8,18,22–24]. Some studies found that longer working hours [25], increased work intensity or patient load per hour [26], and heavy workload [27] can be considered risk factors.

During phase 1 of the lockdown, Italian medical staff and emergency workers dealt with a high number of sick and deceased patients despite the absence of clear intervention protocols, adequate instructions, and PPE. After the event, medical staff and emergency workers considered the consequences once the facts were known. Downward counterfactual thoughts tend to follow close calls or relatively satisfying outcomes, leading to a relatively positive affect, and theoretically provide behavioral prescriptions for how unsatisfying outcomes in the future might be prevented [28]. This way of thinking can favor the use of internal resources of resilience and self-efficacy to cope. However, upward counterfactual thoughts could follow relatively unsatisfying outcomes, and could thus lead to developing a negative affect.

According to Petrocelli [28], upward counterfactual thoughts lead to affective reactions, feelings of blame and responsibility, victim compensation, experienced/perceived regret, and judgments of causality. As argued by several authors, counterfactual thinking can be associated with the mental

states of rumination, regret, and distress [29–33]. Counterfactual thinking occurs especially when people are faced with critical situations or when they perceive that their actions are associated with failures, errors, and the inability to change external events. Counterfactual thinking intervenes in the decision-making processes of everyday life and belongs to both common sense and experts [34]; it tends to be associated with a higher risk of developing stress and psychopathological symptoms [33–35].

### *1.2. Protective Factors against Adverse Mental Health Outcomes in Healthcare and Emergency Workers: Coping and Hardiness*

Several studies have shown that the use of coping strategies and hardiness can help medical staff and emergency workers to better cope with emergency situations. These factors can protect them from complications caused by traumatic events [36].

Coping strategies reduce stress levels and play a mediating role in lowering the risk of psychological symptoms. Several studies have shown how the risk of developing post-traumatic symptoms in stressful situations could be reduced by coping strategies [37–39]. Chesney et al. [40] discovered that stop unpleasant emotions and thoughts is the best coping strategy in terms of decreased levels of perceived stress and increased positive states of mind.

The literature suggests that a widely used coping strategy is avoidance, and that this strategy is associated with higher levels of stress [38,39,41–43] and the development of post-traumatic symptomatology [44]. Coping strategies focused on the problem usually tend to be correlated with lower stress levels in both healthcare workers [45–48] and other emergency workers [41]. Using active coping strategies during COVID-19 reduces stress and leads to using security protocols, seeking support from family and friends, and practicing social isolation measures, but these workers did not find it necessary to discuss their emotions with a professional [49,50].

Several studies found that problem-focused strategies are a protective factor when facing stress in medical staff [51,52], but during the peak of the COVID-19 emergency, the effect was reduced if not associated with adequate preparation [53].

Another protective factor against the adverse mental health outcomes of stress is hardiness, which is an individual attribute associated with resilience. Hardiness can be defined as a personality structure comprising the three related general dispositions of commitment, control, and challenge, and it functions as a resistance resource in encounters with stressful conditions [54]. Hardiness tends to be associated with positive internal states, leading people to consider external events as a challenge and an opportunity for change and self-improvement [55]. Generally, higher levels of hardiness lead to adaptive coping approaches and fewer maladaptive coping approaches to reduce stress levels [56]. Bartone [55] detected not only the link between hardiness and stress, but even the power of hardiness to preserve an individual from stress-related diseases. Hence, individuals with a higher level of hardiness experience lower levels of stress and secondary trauma [57,58]. A meta-analytic study [59] revealed the association between high hardiness and active coping approaches, as well as between low hardiness and avoidance coping [60].

Some studies have found a predictive and/or mediating effect of hardiness on stress and secondary trauma in terms of reducing its negative effects on the health of healthcare and emergency workers and in other contexts [37,61–68].

### *1.3. Mediating Role of Hardiness and Coping on Mental Health in Healthcare and Emergency Workers*

Protective factors, such as resilience and coping strategies, have both direct and mediating effects in reducing the negative effects of stress on health workers. Heath at al. [69] investigated the mediating role of coping strategies and resilience to stress during a pandemic as well as the importance of increasing these factors in healthcare workers to mitigate or minimize potential adverse psychological effects. Most studies have analyzed the predictive and mediating effect of coping strategies and hardiness [65–67] singularly; few studies have analyzed the relationships between resilience, coping strategies, and mental health in healthcare and emergency workers [57,70].

Recent research conducted on stress in healthcare and emergency workers during the COVID-19 pandemic indicated that hardiness [16] and coping strategies [19] play a protective role in the development of secondary trauma [16].

For the purposes of this study, several studies [71–74] found that hardiness and coping strategies are predictors of stress among rescue workers. The results of these studies highlighted the importance of the concepts of stress, coping, and hardiness, as well as their interaction, in the work environment of rescue workers. Researchers such as Spoorthy et al. [72] and Judkins [73] showed that stress can be reduced by adopting coping strategies and increasing the level of hardiness. Only one study [75] analyzed the mediating role of hardiness and coping strategies on stress and secondary trauma in volunteer emergency workers recruited during phase 2 of the COVID-19 lockdown, verifying that hardiness, stop unpleasant emotions and thoughts, and focused on problems reduce the effect of stress in generating arousal and avoidance symptoms. However, a mediating role on aspects of intrusiveness was not recorded. This model builds on Jamal's results and appears to be applicable in emergency situations involving emergency workers, but probably also healthcare workers.

### *1.4. Study Aim and Hypotheses*

Few studies have analyzed the interaction of coping strategies and hardiness on stress among frontline medical and emergency workers [65,75]. The main objective of this study was to identify the direct and mediating effects of hardiness and coping strategies used by both medical staff and emergency workers during the first phase of the COVID-19 pandemic lockdown in Italy to reduce stress factors that may induce the development of secondary trauma symptoms.

The abovementioned studies analyzed and highlighted the effects of some socio-demographic variables, the fact of having treated COVID-19 patients, and the lack of PPE as risk factors for stress reactions. In this study, additional risk factors were analyzed to verify their incidence on the stress perceived by emergency workers, physicians, and nurses.

According to some authors [16,19,22], medical staff and emergency workers can develop acute stress reactions during emergency medical situations, including emotional, cognitive, physical, and social relational reactions, but also ineffective decision-making [38]. Therefore, these factors were investigated our study. In addition, as found in other studies conducted on workers involved in interventions during the pandemic, the fear of contracting the virus and infecting their own families seems to play an important role in generating stress reactions; therefore, this aspect was specifically considered [22,23,57,76].

All these risk factors were measured using a specific questionnaire [16,19] together with the operators' ability to perceive a sense of effectiveness in dealing with stress [40].

This study aimed to verify the following hypotheses:

**Hypothesis 1 (H1).** *Medical staff and emergency workers who have treated COVID-19 patients have higher stress and secondary trauma scores.*

**Hypothesis 2 (H2).** *Physicians and nurses have higher stress and secondary scores than emergency workers.*

**Hypothesis 3 (H3).** *Risk factors have a predictive effect on emergency stress.*

**Hypothesis 4 (H4).** *Hardiness and coping strategies are protective factors and have a negative predictive effect on emergency stress. Other contextual variables, such as groups, sex, and age, were considered as control variables.*

**Hypothesis 5 (H5).** *The predictive effect of emergency stress on secondary trauma is mediated by hardiness and coping strategies (stop unpleasant emotions and thoughts) that reduce the effect.*

## 2. Materials and Methods

### *2.1. Participants*

Participants included healthcare and emergency workers selected during the pandemic emergency using social media, dedicated mailing lists, and forums. Participants were selected on a voluntary basis through a transversal sampling. Hospitals, fire brigade headquarters, various emergency agencies, residential facilities for patients, and civil protection from various Italian regions were contacted to request participation in the study, guaranteeing absolute anonymity of the participants. They completed questionnaires on an online platform that is easy to access for all (Google modules, Italy). The data were collected during the first weeks of the lockdown. All participants were asked to indicate: if they worked in direct contact with COVID-19 patients; if they worked in the hospital and in which department; if their department had been reorganized into a COVID department.

The sample consisted of 240 participants—141 women (58.8%) and 99 men (41.3%)—with a mean age of 43.18 years (SD = 11.05; range 22–67). Participants resided in all Italian regions, and their workplaces of origin could be divided as follows: 37.9%, 39.2%, and 22.9% were from North, Central, and South Italy, respectively. The participants were professionals who directly operated in various sectors during the COVID-19 emergency, such as emergency wards, COVID intensive care units, psychiatry departments, ambulance services, cardiology departments, and orthopedics departments. We divided them into two main groups with respect to the two principal variables of the study: a "workers group" (medical staff vs. emergency workers) and "COVID patients" (workers who treated patients with coronavirus vs. those who did not). In the present study, the variable "COVID patients" was considered important to distinguish workers who had direct contact with COVID-19 patients from those who were exposed to a lower risk of contagion.

The "healthcare and medical staff" subgroup consisted of 140 participants (58.3%) with a mean age of 42.03 years (SD = 11.43; range 22–66)—74 physicians (average age = 41.34; SD = 11.58; range 27–65) and 66 nurses (mean age = 41.09; SD = 10.43; range 23–62). The "emergency" subgroup consisted of 100 participants (41.7%): emergency workers, firefighters, and civil protection staff, whose average age was 44.80 years (SD = 10.35; range 22–67). The two subgroups showed no age differences ($t = -1.926$; $p$ n.s.); even between physicians and nurses, there was no difference in age ($t = -0.132$; $p$ n.s.), whereas a difference emerged in the distribution of the sex variable, with 95 women and 45 men in the medical staff group and 54 men and 46 women in the emergency group ($\chi^2 = 11.50$; $p < 0.001$). Furthermore, 146 (66%) medical staff and 54 (54%) emergency workers claimed to have worked directly with COVID-19 patients ($\chi^2 = 3.360$; $p$ n.s.).

### *2.2. Procedures*

We used an online transactional survey that was administered during phase 1 of the Italian pandemic. The online questionnaire obtained informed consent and baseline sociodemographic information, and asked a series of questions, as described in the next section. Participants' anonymity was maintained when collecting the data. The institutional ethics committee approved all the procedures.

### *2.3. Materials*

In this study, several instruments were administered to evaluate the level of psychological hardiness, coping style, stress, and secondary trauma of each participant. We included the following questionnaires.

Dispositional Resilience Scale-15, Italian version (DRS-15) [77,78]: This is a self-reported questionnaire that measures hardiness. It consists of 15 items scored on a four-point scale ranging from 0 (not at all true) to 3 (completely true). The instrument includes positively and negatively keyed items covering the three conceptually important hardiness components: commitment, control, and challenge. The overall score ranges from 0 to 45, with higher scores indicating a greater level of hardiness. In addition to the total score, the DRS yields scores for three subscales: commitment, control, and challenge. The Alpha coefficients were calculated for this sample because previous Italian

standardization showed low values: 0.83 for the total score and 0.77, 0.71, and 0.70 for the commitment, control, and challenge subscales, respectively. The total DRS appears to be more stable, and only this was used in the present study.

The Coping Self-Efficacy Scale—Short Form (CSES-SF) [40]: This is a 13-item measure of perceived self-efficacy for coping with challenges and threats. This measure focuses on the changes in individuals' confidence in their ability to cope effectively based on self-efficacy theory [40,79]. Participants were asked to rate the extent to which they believed they could perform important behaviors for adaptive coping on an 11-point scale. The instrument yields three subscale scores: problem-focused, stop unpleasant emotions and thoughts, and support. In the absence of an Italian validation of the tool, an analysis of the main components with orthogonal rotation of factors (varimax) was conducted on the study sample. The number of factors to be extracted was initially verified through the unit's largest eigenvalue criterion and, subsequently, by the scree test, and the three components were confirmed. The Alpha coefficients obtained were: 0.81, 0.92, and 0.84 for problem-focused, stop unpleasant emotions and thoughts, and support, respectively. According to previous authors [40], the total score of this tool was not used in this study because individual scales tend to have different predictive effects on perceived stress. It is therefore preferable to keep the individual scales distinct.

Emergency Stress Questionnaire (ESQ, see Appendix A) [16,19,75]: The ESQ is an original self-report instrument already published and validated in previous research to assess the level of stress in healthcare and emergency workers during phases 1 and 2 of the pandemic [16,19,75]. The ESQ consists of 33 items assessed on a five-point Likert scale, with scores ranging from 0 (not at all) to 4 (very much). It includes six scales that were built following several studies on stress factors of workers during emergency situations [22,23,58,72,80–83]: physical emotional, cognitive, decision-making, relational, organizational stress, and COVID stress. Each scale has its own score, and a total score can be calculated [75]. The internal consistency is the following for each scale: organizational–relational stress ($\alpha = 0.71$), physical stress ($\alpha = 0.82$), inefficacy decisional stress ($\alpha = 0.80$), emotional stress ($\alpha = 0.86$), cognitive stress ($\alpha = 0.72$), COVID-19 stress ($\alpha = 0.80$), and total ESQ ($\alpha = 0.93$).

Since the main purpose of this study was not to consider the components of stress perceived by the participants, but their association with secondary trauma and its ability to be mediated through hardiness and coping strategies, only the score for total stress was used in the subsequent analyses.

Secondary Traumatic Stress Scale—Italian Version (STSS-I) [84]: This instrument includes 17 items and detects the symptoms of secondary trauma: arousal, avoidance, and intrusion. The arousal items describe situations characterized by anxiety, confusion, physical, and psychological complaints, as well as agitation. Avoidance items describe the presence of persistent cognitive and affective avoidance of stimuli associated with trauma. Intrusion refers to the re-experiencing of the traumatic event—even if not directly suffered—through internal images and memories. The Italian validation has two scales, and the reliability coefficients were 0.87 and 0.81 for arousal and intrusion, respectively. The Alpha coefficients were calculated for this sample: 0.91, 0.86, and 0.80 for the total score and the arousal and intrusion subscales, respectively.

An original questionnaire/checklist on stressful factors: We constructed an ad hoc seven-item checklist referring to the factors considered in the literature that can increase stress reactions because they increase the feeling of loss of control and reduce the sense of self-efficacy. Often, rescuers, following their interventions, complete debriefings to evaluate the effectiveness of the intervention, also activating a counterfactual reasoning that can, in some cases, increase the sense of frustration associated with greater reactions of emotional, cognitive, and decision-making stress [22,28,33,79,85]. The checklist includes yes/no questions used to detect stress factors identified by the literature, such as:

- Having suggested solutions that have not been considered ("suggestions");
- Having had unexpected and unpredictable events ("unexpected events");
- Having received the necessary instructions to intervene ("instructions");
- Having PPE;
- Having made a decision that proved to be ineffective ("ineffective decision");

- Having received unclear information ("unclear information");
- In hindsight, believing that it would have been appropriate to intervene in a different way ("different behavior").

The last two variables were not considered due to numerous missing items.

### *2.4. Statistical Strategy*

Pearson's correlation analyses were performed to identify the associations between the variables for the two groups considered in this study: ESQ, DRS, coping strategies, and secondary trauma. A multivariate analysis was performed to verify the effects of the "workers" ("emergency", "nurse," and "physician") and "COVID patients" (having treated COVID-patients vs. no COVID patients) groups with regards their total stress, hardiness, coping strategies, and secondary trauma.

We used hierarchical linear regression models to verify the predictive effect of the risk factors on the total stress. A second hierarchical linear regression model was used to verify the protective effect of hardiness and coping strategies on total stress. The models were controlled for age, sex, and group.

According to Baron and Kenny [86], the analysis of the mediating role of coping strategies and hardiness on stress in producing secondary trauma was carried out using correlational analysis, regression analysis, and the Sobel test to show whether indirect effects were significant or not [87].

## 3. Results

Preliminary analyses of the *t*-test between all groups and Pearson's correlations among emergency stress, hardiness, coping strategies, and secondary trauma were conducted (Tables A1 and A2).

A multivariate analysis was performed, assuming total stress, hardiness, coping strategies, and secondary trauma as dependent variables and "COVID patients" (COVID patients vs. no COVID patients) and "workers" groups (emergency workers, nurses, and physicians) as fixed factors. Age and sex were covariates. The model showed significant within-subject effects related to the COVID patients/no COVID patients group (Pillai's value = 0.222, F = 7.791, degrees of freedom (d f) = 8, 219, $p < 0.001$, $\eta^2 = 0.222$) and workers group (Pillai's value = 0.143, F = 2.11, d f = 16, 440, $p < 0.01$, $\eta^2 = 0.071$). An age-related effect also emerged (Pillai's value = 0.125, F = 3.928, d f = 8, 219, $p < 0.001$, $\eta^2 = 0.125$). Sex was significant (Pillai's value = 0.068, F = 2.010, d f = 8, 219, $p < 0.05$, $\eta^2 = 0.068$), and at the level of effects between subjects, we found that women had higher total stress scores than men (F = 7.213, $p < 0.01$, $\eta^2 = 0.031$).

Within subjects, we found an effect linked to the interaction of the two group variables (COVID patients vs. no COVID patients × workers, Pillai's value = 0.119, F = 1.743, d f = 16.440, $p < 0.05$, $\eta^2 = 0.060$), and at the level of effects between subjects, we found a slight significance at the level of total stress (F = 4.153, $p < 0.05$, $\eta^2 = 0.035$), with emergency workers showing lower stress levels than nurses and physicians ($t$ = -3.873, $p < 0.001$, $\eta^2 = 0.062$). Emergency workers and nurses who directly treated COVID patients had slightly higher total stress scores (COVID patients × emergency workers, $t = 2.360$, $p < 0.05$, $\eta^2 = 0.024$; COVID patients × nurses, $t = 2.602$, $p < 0.05$, $\eta^2 = 0.029$). The analysis of the effects between subjects also showed that those who directly treated COVID patients had significantly higher total stress scores (F = 41.088, $p < 0.001$, $\eta^2 = 0.154$), and had significant focused problem (F = 13.926, $p < 0.001$, $\eta^2 = 0.058$), stop unpleasant emotions and thoughts (F = 19.103, $p < 0.001$, $\eta^2 = 0.078$), support (F = 6.596, $p < 0.05$, $\eta^2 = 0.028$), arousal (F = 13.012, $p < 0.001$, $\eta^2 = 0.054$), intrusion (F = 3.588, $p < 0.05$, $\eta^2 = 0.019$), and total trauma (F = 12.840, $p < 0.001$, $\eta^2 = 0.054$) scores. The workers group variable showed effects between subjects only at the ESQ (F = 7.650, $p < 0.01$, $\eta^2 = 0.063$) and stop unpleasant emotions and thoughts (F = 6.047, $p < 0.01$, $\eta^2 = 0.051$) levels. Older workers showed greater use of stop unpleasant emotions/thoughts (F = 4.881, $p < 0.05$, $\eta^2 = 0.021$, $t = 2.608$, $p < 0.05$) and total DRS (F = 4.863, $p < 0.05$, $\eta^2 = 0.021$, $t = 2.205$, $p < 0.05$), but had higher arousal scores (F = 6.785, $p < 0.05$, $\eta^2 = 0.030$, $t = 2.605$, $p < 0.05$).

The distribution of risk factors in the groups was verified, and 126 medical staff and 66 emergency workers had unexpected events ($\chi^2 = 21.00$; $p < 0.001$), whereas 87 healthcare and 45 emergency

workers did not have the necessary instructions ($\chi^2 = 6.93$; $p < 0.05$). For the other variables, we found no differences in their distribution. Within the groups of COVID patients vs. no COVID patients, there were no differences.

Considering both the correlations shown in Table A2 and the effect recorded using MANOVA at the level of the workers group variable, two hierarchical linear regression models were generated to verify Hypotheses 3 and 4, which were then checked for age, sex, and group (workers (emergency workers, physicians, and nurses) and COVID patients vs. no COVID patients). Stress was assumed to be a dependent variable, and risk and protective factors were predictors in the two separate models (Table 1).

**Table 1.** Hierarchical regressions of risk and protective factors on stress ($n = 240$).

| EMERGENCY STRESS (ESQ) | | | | | |
|---|---|---|---|---|---|
| **RISK FACTORS** | | | **PROTECTIVE FACTORS** | | |
| | ***Exp (B)*** | ***B*** | | ***Exp (B)*** | ***B*** |
| Model 1 | | | Model 1 | | |
| Age | −0.125 | −0.084 | Age | −0.123 | −0.082 |
| Sex [1] | 7.196 | 0.217 *** | Sex [1] | 6.905 | 0.206 *** |
| Workers [2] | 3.299 | 0.171 ** | Workers [2] | 3.502 | 0.179 ** |
| COVID patients/No COVID patients | −13.500 | −0.397 *** | COVID patients/No COVID patients | −13.808 | −0.402 *** |
| | $R^2 = 0.262$ | | | $R^2 = 0.263$ | |
| | $F = 20.785$ *** | | | $F = 21.088$ *** | |
| Model 2 | | | Model 2 | | |
| Age | −0.203 | −0.137 * | Age | −0.108 | −0.072 |
| Sex [1] | 8.584 | 0.259 *** | Sex [1] | 6.299 | 0.188 ** |
| Workers [2] | 0.928 | 0.048 | Workers [2] | 2.407 | 0.123 * |
| COVID patients/No COVID patients | −11.942 | −0.351 *** | COVID patients/No COVID patients | −12.214 | −0.355 *** |
| Suggestions [3] | −3.964 | −0.119 * | DRS | −0.749 | −0.194 ** |
| Unexpected events [4] | −9.322 | −0.229 *** | problem focused | −0.053 | −0.020 |
| Instructions [5] | 1.504 | 0.046 | Stop unpleasant emotions/thoughts | −0.328 | −0.192 ** |
| PPE [6] | 4.570 | 0.138 * | Support | 0.173 | 0.063 |
| Ineffective decision [7] | −3.015 | −0.087 | | | |
| | $R^2 = 0.409$ | | | $R^2 = 0.356$ | |
| | $\Delta R^2 = 0.147$ *** | | | $\Delta R^2 = 0.093$ *** | |
| | $F = 17.584$ *** | | | $F = 15.078$ *** | |

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$; [1] Sex (1 = male; 2 = female); [2] Workers (1 = emergency; 2 = physician; 3 = nurse); [3] Suggestions (1 = yes; 2 = no); [4] Unexpected eve nts (1 = yes, 2 = no); [5] Instructions (1 = yes; 2 = no); [6] PPE, personal protective equipment (1 = yes; 2 = no); [7] Ineffective decision (1 = yes; 2 = no).

Mediation models were constructed to verify the main research hypothesis. Since total stress, hardiness, and coping strategies had significant correlations with arousal, intrusion, and total secondary trauma in the mediation model, the total STSS-I score was considered as a dependent variable. In the mediation model, total stress was assumed to be an independent variable; total DRS and coping strategies were mediators.

The regression models showed that total stress was a significant predictor of secondary trauma, hardiness, focused problem, and stop unpleasant emotions/thoughts coping strategies. Total stress was used as a predictor (at the end of paper, the results of the individual regressions are reported as additional analyses (see Appendix B)).

The Sobel test detected significance in the model when total DRS was used as a mediator (Z = 2.35, $p < 0.05$, EM = 0.015, pEM = 0.10), reducing the effect of total stress on secondary trauma (B = 0.136, β = 0.351, $t = 5.748$, $p < 0.001$). The total stress effect was also found to be mediated by stop unpleasant emotions/thoughts (B = 0.119, β = 0.307, $t = 4.879$, $p < 0.001$, Z = 3.16, $p < 0.01$, EM = 0.034, pEM = 0.23), whereas problem focused did not pay a mediating role.

Of the total stress effect on secondary trauma, 33% was found to be mediated by hardiness and coping strategies.

## 4. Discussion

This study involved physicians, nurses, and emergency workers involved in the rescue and treatment of COVID-19 patients during phase 1 of the pandemic in Italy. The comparisons made between the three categories of operators showed a difference in total stress, albeit small, indicating that physicians, nurses, and rescuers were exposed to similar levels of organizational, cognitive, social, and emotional stress. Nurses and physicians had the highest total stress scores, similar to the findings in other studies [16,18]. This is linked to the fact that, despite being the persons who dealt with the physical and material needs of patients throughout their hospital stay, they were most directly exposed to the patients' suffering and, in many cases, to their death.

The factor that seems to have had the most influence in the reference sample was having directly assisted COVID-19 patients. Workers who have treated COVID-19 patients have an increased risk of developing secondary trauma symptoms [10,13,20,21]. The use of cognitive and emotional avoidance strategies, especially in a first emergency phase, as in this case, would seem to allow these workers to limit their sense of helplessness and inability, favoring resilience and the activation of proactive attitudes. Stop negative emotions and thoughts would seem to allow not only a reduction in stress levels, but also the attenuation of arousal and intrusive aspects of the trauma. This efficacy has also been reported in other studies [40].

As found by other authors [10,13,14,16–19], in this study, women also seemed to show higher stress levels than men (Table 1).

Older workers showed a greater tendency to adopt avoidance strategies toward negative thoughts and emotions, but simultaneously exhibited higher levels of arousal. Age, which is also associated with greater personal and professional competence and experience, seems to allow health and emergency workers to block the intrusive aspects of the trauma, thus making them more committed to the intervention and less influenced by the consequences. In other words, this leads them to be less influenced by the intrusive components of their traumatic experiences [88]. However, age seems to be associated with higher arousal levels, and it seems likely that older workers have a greater awareness of the risks associated with the pandemic, as well as a greater sense of responsibility toward patients.

In the present study, we identified the predictive effects on stress of both risk factors and protective factors. The latter refer to personal resources, such as coping strategies, e.g., a sense of self-efficacy in dealing with critical situations or events, and hardiness. As the latter is a component of resilience, it refers to personality characteristics and is generally one of the first components in rescuers to be activated in emergency situations.

Hardiness and stop unpleasant emotions and thoughts presented a negative predictivity with respect to stress and secondary trauma. In the model shown in Table 1, the factor with the most important predictive effect was having directly treated COVID-19 patients; this had a strong impact on the total stress level. Workers who had treated COVID patients, precisely in consideration of the greater organizational, emotional, cognitive, and physical difficulties they experienced, seemed to have limited access to their personal resources in the first phase of the pandemic. Notably, in phase 1 of the pandemic, Italian health workers suffered from a lack of clear and specific intervention protocols, both in operational and pharmacological terms, as well as difficulties with reorganizing departments, a lack of necessary equipment, and little knowledge about the characteristics of the virus. The extent of these difficulties in the first phase of the pandemic may have limited the externalization of individual resources so that the results seem to reveal an absence of significance or protective efficacy of other coping strategies, such as focused problem and support, which normally tend to be more functional in interventions by rescuers, especially in the long term [57,60,69].

Among the risk factors considered in this study, the lack of PPE and the unpredictability experienced in the initial phase produced a predictive effect in terms of increasing the level of stress [18,23,24,28]. The first weeks of intervention in COVID-19 cases also seemed to have been characterized by unexpected events, significantly influencing the high level of stress. In this context of uncertainty and a lack of adequate knowledge, workers provided suggestions based on their

previous experiences and skills, which were not considered, thus increasing their sense of frustration, ineffectiveness, and helplessness, which led to a higher level of stress.

The main stress reduction effect of avoiding negative thoughts may be explained by, especially in phase 1 of an emergency, medical staff and emergency workers experiencing pressure to provide answers as soon as possible. They do not have time to reflect on their own suffering, and, therefore, are not fully aware of their own emotional reactions. Because they are engaged in fast-paced work and constantly focused on what to do, avoiding negative and distracting thoughts can be adaptive for workers. This functioning leads to the suspension of the processes of reflection, brooding, and emotional and cognitive self-awareness [56,60]. This is why stress factors related to counterfactual thinking do not seem to have had a particular impact on stress levels in this first phase, whereas more objective operational aspects, such as lack of PPE and instructions, had a direct and immediate effect on the perception of stress. People who have high hardiness appear to have a broader repertoire of coping strategies and are better at deciding which approaches to use and when. The mental process of ruling out negative thoughts and emotions when responding to a crisis may be facilitated by hardy people's sense of commitment, which involves confidence in their skills and the ability to deal with the challenges being faced [56,60].

Considering the protective function of hardiness and coping strategies found not only in this study, but also in others [16,19,65,67], the mediating role of these factors on the incidence of stress in secondary trauma was also verified [75]. The results obtained from the mediation confirm these hypotheses, even though the effects were small. The same mediation model was tested by Vagni et al. [75] on a sample of emergency workers, which showed wider mediation effects. The difference in findings may be that the participants of the previous study had been recruited in the second phase of the pandemic when necessary procedures and information were already available to workers, favoring increased use of hardiness and coping strategies. In the second phase of the pandemic, the number of patients and victims was significantly lower; conversely, the participants involved in this study were recruited during the lockdown period, and the results showed that one of the main predictive factors of stress was having treated COVID patients, and that, above all, healthcare workers reported higher levels of stress.

Having treated COVID patients led to the development of greater levels of arousal and intrusiveness. The sample analyzed in this study reported having operated with a lack of PPE and sufficient information. These factors, as mentioned, may have had a negative impact, at least in the first phase of the pandemic, on the activation of personal resources in terms of hardiness and coping strategies, resulting in both a lower level of protection and mediation of these factors in stress [60]. A little-known emergency can lead medical staff and emergency workers to experience difficulties in activating both practical and emotional psychological personal resources. Moreover, to protect themselves from the more traumatic aspects related to anxiety and a sense of helplessness due to the high number of deaths, workers used the positive reframing coping strategy, which is the most effective strategy for blocking negative emotions and thoughts. This coping strategy, as also noted by Chesney et al. [40], allowed workers to reinforce positive and optimistic attitudes from which they could draw precisely those hardiness and coping skills useful for actively and functionally dealing with critical events.

During the pandemic, the general population was exposed to several risk factors [89], and medical staff and emergency workers experienced main stressors such as working with COVID-19 patients, the lack of PPE, and some socio-demographic variables. We considered the emergency stress of physicians, nurses, and emergency workers measured using a specific tool and examined the incidence of additional risk factors on their well-being that had not yet been analyzed in other studies. The sample involved is specific and was recruited during the first weeks of the pandemic, when operators were in the phase of greatest pressure in their work. We also focused on individual protection factors that can be implemented through targeted interventions. The main aim of the study was not only to show the incidence of individual factors, but also to offer an understanding of their relationship patterns.

## 5. Limitations

There are some limitations to this study. The first limitation is that the research was conducted through an online platform, so the compilation of the questionnaires was not structured and probably influenced by distraction factors. A second limitation is the small sample, and this may have affected the extent of the significance of the effects obtained in the analysis. A third limitation is that this was a cross-sectional study, whereas a longitudinal study would allow for a better analysis of phenomena, such as the development of symptoms of secondary trauma. The mediation analysis showed small effects. To register a greater capacity for self-efficacy and hardiness in managing emergency stress and preventing secondary trauma, it would be appropriate to construct longitudinal studies to better understand the protective mechanisms that limit traumatic outcomes over time. A final limitation is the use of a self-report questionnaire and participants' lack of knowledge about the presence of previous psychological problems.

## 6. Conclusions

In this study, we aimed to illustrate the difficult situation faced by medical staff and emergency workers during phase 1 of the COVID-19 pandemic in Italy. As described by many studies, not only the direct victims of traumatic events of different nature develop post-traumatic disorder (inter alia, [90–95]), but also the medical staff and emergency workers who care for these victims (inter alia, [96–99]) may develop severe post-traumatic symptoms, as we showed in our study about this health emergency.

The results of this study highlighted how emergency workers, and especially healthcare workers who worked with COVID patients, were exposed to sources of high stress and to the risk of developing secondary trauma. The results showed that nurses and physicians experienced greater levels of emergency stress than emergency workers. Direct contact with COVID-19 patients, female sex, unexpected events, and lack of PPE were risk factors for emergency stress, while resilience and coping strategies played a protective role, reducing the levels of emergency stress that led to the risk of developing secondary trauma. Mediation analysis showed that coping strategies, especially stop unpleasant emotions and thoughts, and hardiness are protective factors and reduce the effect of stress on secondary trauma.

These results suggest that it is necessary to implement immediate interventions that aim to increase the activation of protective factors that can mitigate and prevent the development of serious psychological consequences. Immediate interventions are essential to activate psychological resilience and guide workers in the use of the most effective long-term coping strategies to protect their mental health. Prevention interventions must be developed to guide operators to better deal with traumatic events at work. To this end, hardiness training should be developed for nurses, nursing managers, police, and armed forces [97–99]. Hardiness training should include providing information on hardiness and analyzing case studies with an emphasis on detecting threats, coping strategies, and stress management concepts [100–103].

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## Appendix A

**Emergency Stress Questionnaire**
(ESQ; Vagni, Maiorano, Giostra, Pajardi, 2020)

The following questions refer specifically to your intervention during the COVID-19 emergency. Please consider that there are no right or wrong answers, and it is important that you answer all questions. In answering the following questions, 0 corresponds to "not at all " and 4 to "very". Please mark only one number. Thank you for your collaboration.

| | Not at all | | | | Very |
|---|---|---|---|---|---|
| 1. Did you feel agitated during your work/shift? | 0 | 1 | 2 | 3 | 4 |
| 2. Do you think you weren't able to keep everything under control as you would have liked? | 0 | 1 | 2 | 3 | 4 |
| 3. Did you feel more nervous or irritable than usual? | 0 | 1 | 2 | 3 | 4 |
| 4. During your work, did you feel tension trying to do your job to the best of your ability? | 0 | 1 | 2 | 3 | 4 |
| 5. During the various activities, to what extent did you have the perception that things were going according to your expectations? | 0 | 1 | 2 | 3 | 4 |
| 6. In time spent outside your work, were there any situations that irritated you? | 0 | 1 | 2 | 3 | 4 |
| 7. Did you get angry at someone else's actions or reactions? | 0 | 1 | 2 | 3 | 4 |
| 8. Did you find yourself rethinking about what had happened? | 0 | 1 | 2 | 3 | 4 |
| 9. Are there any images of what happened that come back to your mind involuntarily? | 0 | 1 | 2 | 3 | 4 |
| 10. Did you notice any tension within your work team? | 0 | 1 | 2 | 3 | 4 |
| 11. Did you feel any physical tiredness? | 0 | 1 | 2 | 3 | 4 |
| 12. Did you feel any muscle tension? | 0 | 1 | 2 | 3 | 4 |
| 13. At work, did you notice any tension in your relationship with others? | 0 | 1 | 2 | 3 | 4 |
| 14. Did you feel team spirit? | 0 | 1 | 2 | 3 | 4 |
| 15. Did you perceive that your professional experience was in contrast with the work organization set up for the COVID-19 emergency? | 0 | 1 | 2 | 3 | 4 |
| 16. Did you receive pressure (or criticism) from colleagues or superiors about how you did your job? | 0 | 1 | 2 | 3 | 4 |
| 17. Did you have difficulty concentrating at times? | 0 | 1 | 2 | 3 | 4 |
| 18. Did you ever have a stomach ache? | 0 | 1 | 2 | 3 | 4 |
| 19. Were the provisions and indications for intervention timely? | 0 | 1 | 2 | 3 | 4 |
| 20. Did you ever have headaches? | 0 | 1 | 2 | 3 | 4 |
| 21. Do you regret some decisions you made because you had no choice? | 0 | 1 | 2 | 3 | 4 |
| 22. Were you not always able to accurately predict all the effects of your decisions/interventions? | 0 | 1 | 2 | 3 | 4 |
| 23. Do you think that coordination between the various professional figures was more difficult than expected? | 0 | 1 | 2 | 3 | 4 |
| 24. Would you have acted differently in retrospect? | 0 | 1 | 2 | 3 | 4 |
| 25. Did you find yourself doing things you had never done before? | 0 | 1 | 2 | 3 | 4 |
| 26. Are you fully satisfied with how you worked? | 0 | 1 | 2 | 3 | 4 |
| 27. Did you find yourself working in unpredictable tcircumstances? | 0 | 1 | 2 | 3 | 4 |
| 28. Did you try to carry out your tasks perfectly but take longer to decide/execute? | 0 | 1 | 2 | 3 | 4 |
| 29. Given the conditions in which you found yourself working, did you have to make decisions intuitively/instinctively, having little time available to reflect and ponder the choices? | 0 | 1 | 2 | 3 | 4 |
| 30. Did you worry about putting your family/loved ones at risk of contagion because of your job? | 0 | 1 | 2 | 3 | 4 |
| 31. Were you afraid of getting infected because of your job? | 0 | 1 | 2 | 3 | 4 |
| 32. Did you have sleep disturbances (e.g., insomnia, difficulty falling asleep, early awakening)? | 0 | 1 | 2 | 3 | 4 |
| 33. Did you worry that your colleagues contracted or may contract the infection? | 0 | 1 | 2 | 3 | 4 |

**Table A1.** Average scores on ESQ, DRS, CSES-SF, and STSS-I by group.

| | Emergency Group | Medical Staff Group | Nurse Group | Physician Group |
|---|---|---|---|---|
| | (*n* = 100) Mean (SD) | (*n* = 140) Mean (SD) | (*n* = 66) Mean (SD) | (*n* = 74) Mean (SD) |
| **ESQ** | 69.58 (13.78) | 84.62 (15.61) | 85.74 (16.88) | 81.10 (14.73) |
| **DRS** | 29.20 (4.04) | 27.94 (4.33) | 27.79 (4.42) | 28.43 (3.81) |
| **CSES-SF** | | | | |
| Problem-Focused | 37.88 (6.50) | 36.53 (6.11) | 35.92 (6.41) | 36.68 (5.86) |
| Stop Unpleasant Emotions/Thoughts | 36.79 (8.80) | 32.51 (10.13) | 33.21 (10.61) | 31.18 (9.58) |
| Support | 20.92 (6.39) | 21.01 (5.78) | 21.02 (6.43) | 20.45 (5.74) |
| **STSS-I** | | | | |
| Arousal | 24.03 (4.04) | 26.40 (24.03) | 26.38 (4.53) | 25.47 (3.67) |
| Intrusion | 14.40 (4.63) | 15.15 (4.92) | 14.30 (5.27) | 15.43 (5.00) |
| Total STSS-I | 38.85 (6.08) | 40.47 (6.42) | 40.46 (6.65) | 40.47 (6.37) |

ESQ, Emergency Stress Questionnaire; DRS-15, Dispositional Resilience Scale; CSES-SF, Coping Self-Efficacy Scale—Short Form; STSS-I, Secondary Traumatic Stress Scale—Italian Version.

**Table A2.** Pearson's correlation between ESQ, DRS-15, CSES-SF, and STSS-I (*n* = 240).

| | DRS-15 | CSES-SF | | | STSS-I | | |
|---|---|---|---|---|---|---|---|
| | Total DRS | Problem-Focused | Stop Unpleasant Emotions/Thoughts | Support | Arousal | Intrusion | Total STSS-I |
| **ESQ** | | | | | | | |
| Total Stress | −0.177 ** | −0.268 *** | −0.348 *** | −0.095 | 0.418 *** | 0.204 ** | 0.391 *** |
| **Tot DRS** | 1 | 0.146 * | 0.150 * | 0.056 | −0.283 *** | 0.005 | −0.253 *** |
| **CSES-SF** | | | | | | | |
| Problem-Focused | 0.146 * | 1 | 0.479 *** | 0.273 *** | −0.161 ** | −0.133 * | −0.219 ** |
| Stop Unpleasant Emotions -Thoughts | 0.150 * | 0.479 *** | 1 | 0.392 *** | −0.271 *** | −0.197 ** | −0.344 *** |
| Support | 0.56 | 0.273 *** | 0.392 *** | 1 | −0.180 ** | −0.136 * | −0.196 ** |
| **STSSI** | | | | | | | |
| Arousal | −0.283 *** | −0.161 ** | −0.271 *** | −0.180 ** | 1 | 0.486 *** | 0.683 *** |
| Intrusion | 0.005 | −0.133 * | −0.197 ** | −0.136 * | 0.486 *** | 1 | 0.611 *** |
| Total STSS-I | −0.253 *** | -0.219 ** | −0.344 *** | −0.196 ** | 0.683 *** | 0.611 *** | 1 |

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$; ESQ, Emergency Stress Questionnaire; DRS-15, Dispositional Resilience Scale; CSES-SF, Coping Self-Efficacy Scale—Short Form; STSS-I, Secondary Traumatic Stress Scale—Italian Version.

## Appendix B

### *Additional Analyses*

The regression models showed that total stress is a significant predictor of total STSS-I (B = 0.151, β = 0.391, $t = 6.514$, $p < 0.001$, $R^2 = 0.153$, F = 42.433). Total stress has predictive effects on total DRS (B = −0.062, β = −0.240, $t = -3.820$, $p < 0.001$, $R^2 = 0.058$, F = 14.590), being problem-focused (B = −0.102, β = −0.268, $t = -4.290$, $p < 0.001$, $R^2 = 0.072$, F = 18.406), and stop unpleasant emotions/thoughts (B = −0.205, β = −0.348, $t = -5.716$, $p < 0.001$, $R^2 = 0.121$, F = 32.668). Support coping was excluded because total stress was not shown to have a significant effect. The following variables are significant predictors of total STSS-I: total DRS (B = −0.374, β = −0.253, $t = -4.001$, $p < 0.001$, $R^2 = 0.074$, F = 16.004), being problem-focused (B = −0.223, β = −0.219, $t = -3.433$, $p < 0.01$, $R^2 = 0.048$, F = 11.788), and stop unpleasant emotions/thoughts (B = −0.227, β = −0.344, $t = -5.606$, $p < 0.001$, $R^2 = 0.118$, F = 31.427).

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# Analysis of Burnout Syndrome and Resilience in Nurses throughout the COVID-19 Pandemic: A Cross-Sectional Study

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**Abstract:** Background: The COVID-19 pandemic has contributed to the occurrence of work-related stress on nursing staff. Being resilience an essential element to countering adversity. The aim of the study was to assess burnout syndrome as well as resilience in hospital-care nurses during the first outbreak of the COVID-19 pandemic. Methods: A cross-sectional descriptive study of burnout syndrome and resilience of 101 nurses during the first COVID-19 outbreak. The Maslach Burnout Inventory and the Scale of Resilience of Connor-Davidson were used. Results: The burnout average score was 74.35 ± 12.78 points, and resilience was 27.94 ± 5.84. Temporary nurses reached a lower average score for the emotional fatigue dimension (23.80 ± 10.39 points) $p < 0.05$. The emotional fatigue dimension correlated adversely with the average score of resilience (r = −0.271; $p < 0.001$). Conclusions: The level of burnout in nurses was high, being higher on those who took care of COVID-19 patients. Resilient nurses were able to better cope with stressful situations.

**Keywords:** COVID-19; burnout; professional; nurses; resilience; psychological



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## 1. Introduction

The COVID-19 pandemic has placed all countries under extreme medical and economical strain. The 7818 cases registered around the world until 30 January 2020 caused the World Health Organization (WHO) to begin taking measures, establishing the highest health alert in response to inaction and declaring the COVID-19 outbreak as a pandemic on 11 March 2020 [1].

Cumulative cases worldwide between 31 December 2019 and 2 November 2020 were 4,659,7299 (1,201,162 deaths), with 10,324,515 in Europe with Spain being the third European country with the greater impact at that time (1,185,678 cases) [2].

In Spain, according to Red Nacional de Vigilancia Epidemiológica (RENAVE) the largest amount of cases occurred within the 15–65-year group (68% of total). [3].

The COVID-19 pandemic has increased the demand for nurses needed to provide quality healthcare; it has likewise showed the need to guarantee a strong and enduring workforce. Workload, temporary staff recruitment, reduction of autonomy, and continuous organizational change are a hardship for the nursing workforce. This situation, along with the pressure of working pressure and the insecurity forces nurses to deal with high stress levels and anxiety [4]. Burnout is a challenges with which nurses are frequently confronted; it linked to their job, as are stress levels and responsibility [5]. Maslach defines burnout as a set of symptoms involving a physical and psychological dimension, including negative attitudes derived from work and personal relationships that lead to exhaustion, fatigue, distress, and despair [6].

Continuous exposure to stress situations may have negative impact on mental and physical health; therefore, there could be a significant impact on job performance. The COVID-19 pandemic could result in high levels of anxiety in nurses with major stress loads [7].

Adversity in light of the increase in workload along with the lack of material resources were described beforehand as factors that raised stress amongst nursing staff in a crisis; being resilience is the optimal way to deal with change effectively [8]. Nurses can be overwhelmed by stress, affecting their physical and mental well-being [9]. Resilience is defined as a person's multidimensional learning capacity that enables them to function at a high level when dealing with adversity [10]. Resilience contributes to reducing the negative impact of stress within the working environment, as well as to adapting to work challenges and improving personal resources [11]. Resilience can be a predictor of burnout in nurses, due to its association with exhaustion and its influence on it [12]. Higher levels of personal resilience and social and organizational support have been associated with reduced levels of anxiety related to the COVID-19 pandemic [7].

In the workplace, specific interventions that foster the well-being of nurses should be promoted [13]. These are necessary to address organizational barriers and the risks of burnout and stress [14]. Yöruk et al. consider that psychological difficulties may cause other permanent long-term problems if they are not treated in time. It is important to protect the mental well-being as well as the physical health of health professionals facing COVID-19. Resilience is crucial to adapt and strive against labor challenges and to reduce symptoms of stress, emotional burnout, cynicism, and depression [15].

The work pressures suffered by nurses in an overloaded and under-resourced health-care system have an impact on their mental state [16]. Therefore, those responsible for the management of healthcare personnel should plan emotional support and physical, psychological, and reciprocal social strategies [4]. The pandemic caused by COVID-19 has shown a lack of coordination of material and human resources in Spain as in other healthcare systems [17]. To identify the impact of health in health personnel will allow us to address strategic actions to reduce burnout and to foster resilience [18].

The present study proposes to assess burnout syndrome and resilience of nurses during the COVID-19 pandemic to establish future actions which will allow us to improve situations and to deal with work stress.

## 2. Materials and Methods

### *2.1. Study Design*

This was a descriptive cross-sectional study of burnout syndrome and resilience in registered nurses during the first outbreak of the COVID-19 pandemic.

### *2.2. Sample and Study Participants*

The study was carried out in a third-level hospital of the Regional Health Service in Spain, on a population of 1022 active nurses in hospitalization units and special services from 1 March to 30 May 2020.

The sample was made up of 101 nurses who answered voluntarily and anonymously the following questionnaires: the Maslach Burnout Inventory and the Scale of Resilience of Connor-Davidson (10-item CD-Risc) [6,19]. These questionnaires were answered during May 2020 through the hospital's intranet system. Nurses who were on sick leave during the period of the study were excluded.

### *2.3. Data Collection and Variables of the Study*

During May 2020, digital access to a questionnaire was provided through the hospital's intranet system. In order to fill in the questionnaire, it was necessary to read the purpose of the study as well as to explicitly agree to participate. The form consisted of the Maslach Burnout Inventory questionnaire and the Scale of Resilience of Connor-Davidson (10-item

CD-Risc). The following socio-demographic variables were used: age, gender, working unit, and type of employment contract.

In order to analyze burnout syndrome, a validated tool scale of the Maslach Burnout Inventory questionnaire was used in its Spanish-adapted version [20] which is composed of 22 items with a score of 0 to 6 points: 0 = never, 6 = on a daily basis. (Table S1: Maslach Burnout Inventory questionnaire scale, version adapted to Spanish). The questionnaire is divided into three dimensions:

- Emotional fatigue or emotional burnout. Questions 1, 2, 3, 6, 8, 13, 14, 16, and 20.
- Cynicism. Questions 5, 10, 11, 15, and 22.
- Personal fulfilment. Questions 4, 7, 9, 12, 17, 18, 19, and 21.

Answers were categorized according to the average score obtained and the following classification:

- Emotional fatigue or emotional burnout. Low < 15 points, medium 15–24 points, high > 24 points.
- Cynicism. Low < 4 points, medium 4–9 points, high > 9 points.
- Personal fulfilment. Low < 33 points, medium 33–39 points, high > 39 points.

The reliability of the questionnaire as per $\alpha$ of Cronbach ranged from 0.72 to 0.90 [19]. To analyze resilience, the Scale of Resilience of Connor-Davidson (10-item CD-Risc) validated in its Spanish version was also used [20]. This is composed of 10 items measured through the 0–4 point Likert scale (0 = totally disagree, 4 = totally agree). (Table S2: Connor-Davidson Resilience Scale version adapted to Spanish).

In the validation of the Spanish version, a Cronbach's $\alpha$ reliability of 0.85 was obtained [21].

### 2.4. Ethical Considerations

Participation was voluntary and data processing was anonymous and confidential in accordance with current regulations. The research followed the rules on bioethics established in the Declaration of Helsinki and its latest update. This project was approved by the Clinical Research Ethics Committee (reference number: PI 20-1831).

### 2.5. Statistical Analysis

Data were analyzed with the IBM SPSS v. 22.0 software (IBM, Armonk, New York, NY, USA). A descriptive analysis was carried out through centralization measures for quantitative variables and through frequencies for qualitative variables. To establish the reliability of the scales, an analysis of the internal validity was undertaken based on the determination of the coefficient $\alpha$ of Cronbach. A Chi-square test was used to assess the association between the sociodemographic variables and the results of the survey for qualitative variables and analysis of variance (ANOVA). A $p$ value < 0.05 was considered statistically significant.

## 3. Results

A total of 101 registered nurses participated in the study with an average age of 41.27 $\pm$ 10.03 years old; 93 were women (41.27 $\pm$ 10.11 years) and 8 were men (41.25 $\pm$ 9.72 years).

With regards to the assistance unit, 54 nurses (53.46%) developed their work in units aimed exclusively at patients with COVID-19 whereas 47 nurses (46.54%) developed theirs in units aimed at patients with COVID-19-free pathologies.

During the course of the pandemic, 31 nurses (30.69%) were switched from their assistance position to another hospital unit by the nursing management. The average age of the shifted nurses was lower than that of who maintained their usual job position (38.58 $\pm$ 9.97 years vs. 42.46 $\pm$ 9.89 years).

The type of employment contract of the nurses who participated in the study was mainly a non-permanent contract and their average age was lower than the average age of the permanent staff (Table 1).

**Table 1.** Working situation and age of nurses.

| | Type of Employment Contract | | | *p*-Value |
|---|---|---|---|---|
| | Temporary N (%) 21 (20.79%) | Interim N (%) 40 (39.6%) | Permanent N (%) 40 (39.6%) | |
| Average age (years) | 30.38 ± 7.45 | 39.33 ± 5.81 | 48.93 ± 8.24 | <0.001 |

The average score of the Maslach Burnout Inventory scale in the Spanish version was 74.35 ± 12.78 points, without showing significant differences between men (72.65 ± 14.59 points) and women (74.50 ± 12.69 points), $p = 0.69$.

'Emotional fatigue or emotional burnout' dimension showed an average score of 29.53 ± 11.03 points, the 'cynicism' dimension average score was 9.20 ± 5.95 points, and 'personal fulfilment' dimension average score was 35.62 ± 6.55 points. With respect to gender, the 'emotional fatigue or emotional burnout' dimension revealed an average score in women of 29.61 ± 11 points and in men of 28.62 ± 12.16 points ($p = 0.809$). In the 'cynicism' dimension, the average score for women was 9.05 ± 5.96 points and for men 10.87 ± 5.93 points ($p = 0.409$). Lastly, in the 'personal fulfilment' dimension the average score for women was 35.83 ± 6.61 points and 33.12 ± 5.43 points for men ($p = 0.263$).

The average scores of the Maslach Burnout Inventory scale obtained in the Spanish version were analyzed in relation to the type on employment contract, showing statistically significant differences (Table 2).

**Table 2.** Average score of burnout and dimensions as per type of employment contract.

| | | Type of Employment Contract | | | *p*-Value |
|---|---|---|---|---|---|
| | | Temporary N (%) 21 (20.79%) | Interim N (%) 40 (39.6%) | Permanent N (%) 40 (39.6%) | |
| Dimension | Emotional fatigue or emotional burnout | 23.80 ± 10.39 | 30.67 ± 8.76 | 31.40 ± 12.54 | 0.025 |
| | Cynicism | 9.95 ± 5.84 | 10.07 ± 6.49 | 7.92 ± 5.33 | 0.221 |
| | Personal Fulfilment | 38.38 ± 5.73 | 33.90 ± 7.11 | 35.90 ± 5.93 | 0.036 |
| Total Burnout | | 72.14 ± 11.63 | 74.65 ± 11.89 | 75.22 ± 14.30 | 0.663 |

Nurses who worked in units with patients with COVID-19 showed a higher average score (76.5 ± 11.89 points vs. 71.89 ± 13.44 points; $p = 0.071$) as well as in 'emotional fatigue or emotional burnout' (32.24 ± 11.14 points vs. 26.42 ± 10.14 points; $p = 0.008$) and 'cynicism' dimensions (9.51 ± 5.78 points vs. 8.82 ± 6.18 points; $p = 0.56$). However, the 'personal fulfilment' dimension average score was higher in nurses who worked in units with patients with non-COVID-19 pathologies (36.73 ± 4.78 points vs. 34.74 ± 7.70 points; $p = 0.135$).

Figure 1 illustrates the distribution of the results obtained when categorizing the three dimensions in the burnout evaluation questionnaire. A high inclination was observed in the 'emotional fatigue or emotional burnout' and 'cynicism' dimensions. However, there was a lower risk in the 'personal fulfilment' dimension. (Figure 1).

'Emotional fatigue or emotional burnout' remained high in nurses who worked in units with patients with COVID-19, compared to those nurses who worked in units with patients with non-COVID-19 pathologies (n = 41.75.9% vs. n = 25.53.2%; $p < 0.05$).

With respect to resilience analysis, the average score was 27.94 ± 5.84 points, without observing significant differences by gender. Women had an average of 28.07 ± 5.93 points compared to the 26.37 ± 4.65 points of men; $p = 0.432$. Likewise, major differences were not observed in relation to the average results obtained between nurses in units with patients

with COVID-19 (28.46 ± 5.91 points) and nurses in units with patients with non-COVID-19 pathologies (27.34 ± 5.76 points), $p = 0.338$.

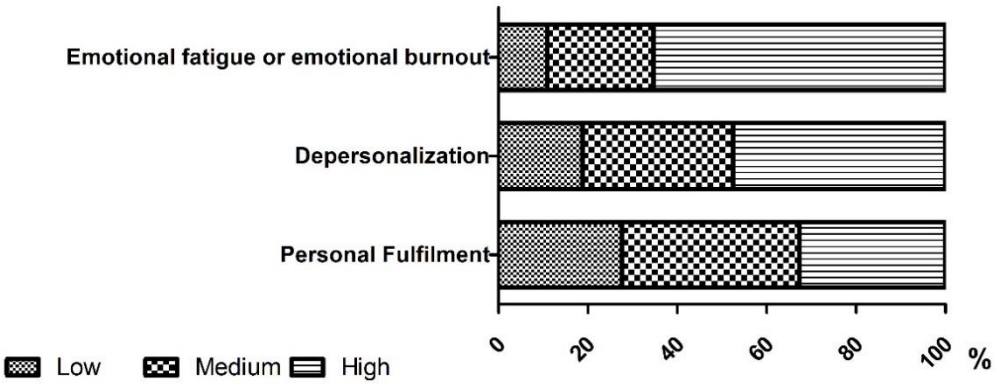


**Figure 1.** Categorization of burnout risk in each of its dimensions.

When studying the results obtained according to the type of employment contract, significant differences were not observed in the resilience average score, even though nurses with a temporary contract showed a higher score (30.28 ± 4.32 points) than interim nurses (26.60 ± 6.69 points) and permanent nurses (28.05 ± 5.31 points), $p = 0.062$.

The total average score of burnout did not relate significantly to the average score of resilience. The 'Emotional fatigue or emotional burnout' dimension related adversely to the average score of resilience ($r = -0.271$; $p < 0.001$). The 'cynicism' dimension showed a negative correlation without being statistically significant. The 'personal fulfilment' dimension showed a positive correlation with the average score of resilience ($r = 0.288$; $p < 0.001$).

## 4. Discussion

The first outbreak of the COVID-19 pandemic caused high working pressure as well as the need for quick decision-making with ethical implications, which made nurses vulnerable to stress [22]. This is reflected in the results of our study which reveal evidence of burnout within the nurses who participated in it.

The level of burnout in the nurses of the study was high. The 'emotional fatigue or emotional burnout' dimension (average score: 29.53 ± 11.03 points) was comparable to other studies (29.13 ± 10.30 points and 32.21 ± 12.01 points, respectively [23,24]). The results of the study regarding the 'cynicism' dimension (9.20 ± 5.95 points) were more favorable than scores in other studies [23,24]. Discrepancies in the results of the 'personal fulfilment' dimension in the aforementioned studies were observed; the study by Jose et al. showed a better score (37.68 ± 5.17 points) in contrast to our result (35.62 ± 6.55 points).

In our study, the nurses with the highest levels of stress were those with more job stability—permanent and interim nurses compared to temporary nurses. This may be due to the fact that the increase in recruitment of nurses during the pandemic meant that newly qualified nurses entered the labour market without having experienced previous work overload and with a high level of motivation. Regardless of career prospects, this group was also the most resilient.

Other investigations that analyze heterogeneous samples of nurses who work in different departments have shown that age, sex, or length of service are not significantly associated with presenting stress levels [25].

Nurses who took care of patients with COVID-19 showed a higher level of burnout than those nurses who took care of patients with non-COVID-19 pathologies. This was especially evident in the higher average score in the 'emotional fatigue or emotional burnout' dimension. Other projects also reflect the relationship between high levels of stress and tiredness and caring for patients with COVID-19 [26–28]. In contrast, nurses who took care of patients with other pathologies showed a better score in the 'personal fulfilment' dimension. Working with

COVID-19 patients is considered to be a health threat and leads to exhaustion, also linked to psychosocial factors that claim healthcare resources. These are all reasons for the appearance of burnout amongst nurses [29]. Continued work activity during the pandemic may have been a risk factor in the occurrence of burnout, mainly among nurses who had to attend COVID-19 patients. The implementation of exceptional safety measures in patient management, together with the initial lack of knowledge and the lack of effective management of the pandemic in the health care setting, may have been another factor that justified a greater predisposition to emotional exhaustion among nurses.

In our study, temporary contracts predominated in younger nurses who obtained a lower average score in the 'emotional fatigue or emotional burnout' dimension, in comparison with nurses with an interim or permanent contract. Regarding the 'personal fulfilment' dimension, nurses with a temporary contract showed the highest score followed by nurses with a permanent contract and interim nurses. These results contrast with the results obtained in other studies, which show that young nurses suffer a higher level of burnout than older and more experienced nurses due to a lack of working experience [28].

Our study observed a strong connection between 'emotional fatigue or emotional burnout' and resilience, in the same way as the relationship between 'personal fulfilment' and resilience. Similar results are gathered in studies such as that by Jose et al. that showed an increase of resilience within nurses, which helped to mitigate burnout signs [23], allowing a positive adaptation to situations with a high workload and work-related stress.

Resilience is necessary to cope with the health crisis caused by COVID-19 and arises as the moderating variable able to reduce the relationship between the negative effect and compassion satisfaction [25]. Resilience, as a single feature based on traits, becomes a coping mechanism to adversity in each person so it is necessary to foster it [30].

The health and social situation in which nurses are involved during the COVID-19 pandemic creates a high working pressure and can also trigger psychological issues [21]. In order to continue with their job, nurses will need moral support and a strong leadership that designs strategies to reduce the stress to which they are subjected [31]. Resilience should also be promoted bearing in mind the current social context which can be a barrier to the development of a positive adaptation [32].

Implementing support strategies within health institutions would allow them to improve the work-related stress management of their employees. Facing a health crisis like to one caused by COVID-19, an appropriate human and resources management is essential in order to prevent and cope with work-related stress and to handle related consequences. The type of contract of nurses in healthcare institutions could be a predictor of burnout syndrome [12].

Within the constraints of this study it is worth highlighting the lack of randomness of the analyzed sample as well as the sample selection in which nurses of hospitalization and special units participated voluntarily. It would be necessary to repeat the same study not only at a hospital-care level, but also in primary and home care. Nevertheless, these aspects did not alter the main aim of the study.

## 5. Conclusions

This work shows the stress situation nurses must deal with in a health crisis. The analysis of burnout syndrome demonstrates a prevalence of 'emotional fatigue or emotional burnout' in nurses during the first outbreak of COVID-19. Nurses who took care of patients with COVID-19 featured a higher level of burnout.

Nurses with higher average scores in resilience better faced up to emotional burnout and cynicism.

The type of working contract may be a predictor of the level of stress and resilience. In order to achieve an effective management system that helps to improve positive attitudes and human relations, nursing administrations should consider this in order to plan strategies to reduce burnout and increase resilience.

**Supplementary Materials:** The following are available online at https://www.mdpi.com/article/10.3390/ijerph181910470/s1, Table S1: Maslach Burnout Inventory questionnaire scale, version adapted to Spanish, Table S2: Connor-Davidson Resilience Scale version adapted to Spanish.

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