LAMPIRAN

Lampiran 1

PENILAIAN ANALISIS *CRITICAL APPRAISAL* JBI (JOANNA BRIGGS INSTITUE)

INSTRUMENT JOANNA BRIGGS INSTITUE (JBI)

CRITICAL APPRAISAL CHECKLIST FOR ANALYTICAL CROSS SECTIONAL STUDIES

A. LEMBAR CEKLIST JBI

1. Critical Appraisal Systematic Review* : *Association of burnout syndrome and global self-esteem among Polish nurses*. *Archives of Medical Science

Instrumen Joanna Briggs Institute (JBI)

Critical Appraisal Checklist for Analytical Cross Sectional Studies

Reviwer : Ariep Padilah Date : Juli 2020

Author : Ewa Kupcewicz dan Marcin J Year : 2020

Record Number : DOI : https://doi.org/10.5114/aoms.2019.88626

	Yes	No	Unclear	Not applicable
1. Apakah kriteria untuk dimasukkan dalam sampel didefinisikan dengan jelas?	√			

2. Apakah subyek penelitian dan pengaturannya dijelaskan secara rinci?	√			
3. Apakah paparan diukur dengan cara yang valid dan dapat diandalkan?	√			
4. Apakah objektif, kriteria standar digunakan untuk pengukuran kondisi?	√			
5. Apakah faktor perancu diidentifikasi?	√			
6. Apakah strategi untuk menangani faktor perancu dinyatakan?	√			
7. Apakah hasil diukur dengan cara yang valid dan dapat diandalkan?	√			
8. Apakah analisis statistik yang sesuai digunakan?	√			

2. ***Critical Appraisal Systematic Review* : *The Burden of Burnout Syndrome in Pediatric Intensive Care Unit and Pediatric Emergency Department: A Multicenter Evaluation. Pediatric Emergency Care.***

Instrumen Joanna Briggs Institute (JBI)

Critical Appraisal Checklist for Analytical Cross Sectional Studies

Reviwer : Ariep Padilah Date : Juli 2020

Author : Mutlu Uysal Yazıcı, MD. Dkk Year : 2019

Record Number : ISSN: 0749-5161

	Yes	No	Unclear	Not applicable
1. Apakah kriteria untuk dimasukkan dalam sampel didefinisikan dengan jelas?	√			
2. Apakah subyek penelitian dan pengaturannya dijelaskan secara rinci?	√			
3. Apakah paparan diukur dengan cara yang valid dan dapat diandalkan?	√			
4. Apakah objektif, kriteria standar digunakan untuk pengukuran kondisi?	√			
5. Apakah faktor perancu diidentifikasi?	√			
6. Apakah strategi untuk menangani faktor perancu dinyatakan?	√			
7. Apakah hasil diukur dengan cara yang valid dan dapat diandalkan?	√			
8. Apakah analisis statistik yang sesuai digunakan?	√			

3. ***Critical Appraisal Systematic Review* : *Burnout assessment in nurses from a general emergency service***

Instrumen Joanna Briggs Institute (JBI) Critical Appraisal Checklist for Analytical Cross Sectional Studies

Reviwer : Ariep Padilah Date : Juli 2020

Author : Daniela.F.R.N, Isabel.C.R.M, Patrícia.C.P.S.V.R, Paulo.R.C.S Year : 2019

Record Number : DOI: http://dx.doi.org/10.1590/0034-7167-2017-0870

	Yes	No	Unclear	Not applicable
1. Apakah kriteria untuk dimasukkan dalam sampel didefinisikan dengan jelas?	√			
2. Apakah subyek penelitian dan pengaturannya dijelaskan secara rinci?	√			
3. Apakah paparan diukur dengan cara yang valid dan dapat diandalkan?	√			
4. Apakah objektif, kriteria standar digunakan untuk pengukuran kondisi?	√			
5. Apakah faktor perancu diidentifikasi?		√		
6. Apakah strategi untuk menangani faktor perancu dinyatakan?		√		
7. Apakah hasil diukur dengan cara yang valid dan dapat diandalkan?	√			
8. Apakah analisis statistik yang sesuai digunakan?	√			

4. ***Critical Appraisal Systematic Review* : *Burnout among workers in emergency Departments in Palestinian hospitals: prevalence and associated factors*. *BMC health services research***

Instrumen Joanna Briggs Institute (JBI)

Critical Appraisal Checklist for Analytical Cross Sectional Studies

Reviwer	: Ariep Padilah	Date : Juli 2020
Author	: Motasem Hamdan, Asma'a Abu Hamra	Year : 2017
Record Number	: DOI 10.1186/s12913-017-2356-3	

	Yes	No	Unclear	Not applicable
1. Apakah kriteria untuk dimasukkan dalam sampel didefinisikan dengan jelas?	√			
2. Apakah subyek penelitian dan pengaturannya dijelaskan secara rinci?	√			
3. Apakah paparan diukur dengan cara yang valid dan dapat diandalkan?	√			
4. Apakah objektif, kriteria standar digunakan untuk pengukuran kondisi?	√			
5. Apakah faktor perancu diidentifikasi?		√		
6. Apakah strategi untuk menangani faktor perancu dinyatakan?		√		
7. Apakah hasil diukur dengan cara yang valid dan dapat diandalkan?	√			
8. Apakah analisis statistik yang sesuai digunakan?	√			

5. ***Critical Appraisal Systematic Review : Self-esteem, job satisfaction and burnout between general and psychiatric nursing staff***

Instrumen Joanna Briggs Institute (JBI)

Critical Appraisal Checklist for Analytical Cross Sectional Studies

Reviwer : Ariep Padilah Date : Juli 2020

Author : Jubin Mathew, dkk Year : 2014

Record Number : DOI: 10.1177/0972063413516232

	Yes	No	Unclear	Not applicable
1. Apakah kriteria untuk dimasukkan dalam sampel didefinisikan dengan jelas?	√			
2. Apakah subyek penelitian dan pengaturannya dijelaskan secara rinci?	√			
3. Apakah paparan diukur dengan cara yang valid dan dapat diandalkan?	√			
4. Apakah objektif, kriteria standar digunakan untuk pengukuran kondisi?	√			
5. Apakah faktor perancu diidentifikasi?	√			
6. Apakah strategi untuk menangani faktor perancu dinyatakan?	√			
7. Apakah hasil diukur dengan cara yang valid dan dapat diandalkan?	√			
8. Apakah analisis statistik yang sesuai digunakan?	√			

6. ***Critical Appraisal Systematic Review* : *Analysis of the mediating role of self-efficacy and self-esteem on the effect of workload on Burnout's influence on nurses' plans to work longer***

Instrumen Joanna Briggs Institute (JBI)

Critical Appraisal Checklist for Analytical Cross Sectional Studies

Reviwer : Ariep Padilah Date : Juli 2020

Author : Maria del Mar Molero, dkk Year : 2018

Record Number : DOI : 10.3389/fpsyg.2018.02605

	Yes	No	Unclear	Not applicable
1. Apakah kriteria untuk dimasukkan dalam sampel didefinisikan dengan jelas?	√			
2. Apakah subyek penelitian dan pengaturannya dijelaskan secara rinci?	√			
3. Apakah paparan diukur dengan cara yang valid dan dapat diandalkan?	√			
4. Apakah objektif, kriteria standar digunakan untuk pengukuran kondisi?		√		
5. Apakah faktor perancu diidentifikasi?		√		
6. Apakah strategi untuk menangani faktor perancu dinyatakan?	√			
7. Apakah hasil diukur dengan cara yang valid dan dapat diandalkan?	√			
8. Apakah analisis statistik yang sesuai digunakan?	√			

7. ***Critical Appraisal Systematic Review* : *Burnout in health professionals according to their self-esteem, social support and empathy profile***

Instrumen Joanna Briggs Institute (JBI)

Critical Appraisal Checklist for Analytical Cross Sectional Studies

Reviwer : Ariep Padilah Date : Juli 2020

Author : Maria del Mar Molero, dkk Year : 2018

Record Number : DOI : 10.3389/fpsyg.2018.00424

	Yes	No	Unclear	Not applicable
1. Apakah kriteria untuk dimasukkan dalam sampel didefinisikan dengan jelas?	√			
2. Apakah subyek penelitian dan pengaturannya dijelaskan secara rinci?	√			
3. Apakah paparan diukur dengan cara yang valid dan dapat diandalkan?	√			
4. Apakah objektif, kriteria standar digunakan untuk pengukuran kondisi?		√		
5. Apakah faktor perancu diidentifikasi?		√		
6. Apakah strategi untuk menangani faktor perancu dinyatakan?	√			
7. Apakah hasil diukur dengan cara yang valid dan dapat diandalkan?	√			
8. Apakah analisis statistik yang sesuai digunakan?	√			

8. Critical Appraisal Systematic Review : Effects of Traumatic Events, Compassion Fatigue, Self-esteem, and Compassion Satisfaction on Burnout of Nurses in Emergency Department (ED)

Instrumen Joanna Briggs Institute (JBI)

Critical Appraisal Checklist for Analytical Cross Sectional Studies

Reviwer : Ariep Padilah Date : Juli 2020

Author : Jun, Yeon-Jin and Sung, Mi Hae Year : 2014

Record Number : ISSN 2287- 2531. http://dx.doi.org/10.5807/kjohn.2014.23.2.80

	Yes	No	Unclear	Not applicable
1. Apakah kriteria untuk dimasukkan dalam sampel didefinisikan dengan jelas?	√			
2. Apakah subyek penelitian dan pengaturannya dijelaskan secara rinci?	√			
3. Apakah paparan diukur dengan cara yang valid dan dapat diandalkan?	√			
4. Apakah objektif, kriteria standar digunakan untuk pengukuran kondisi?	√			
5. Apakah faktor perancu diidentifikasi?	√			
6. Apakah strategi untuk menangani faktor perancu dinyatakan?	√			
7. Apakah hasil diukur dengan cara yang valid dan dapat diandalkan?	√			
8. Apakah analisis statistik yang sesuai digunakan?	√			

9. ***Critical Appraisal Systematic Review* : *Effects of Workplace Bullying, Job Stress, Self-esteem, and Burnout on the Intention of University Hospital Nurses to Keep Nursing Job***

Instrumen Joanna Briggs Institute (JBI)

Critical Appraisal Checklist for Analytical Cross Sectional Studies

Reviwer : Ariep Padilah Date : Juli 2020

Author : Yom, Young-Hee, dkk Year : 2017

Record Number : ISSN 1225-9330. https://doi.org/10.11111/jkana.2017.23.3.259

	Yes	No	Unclear	Not applicable
1. Apakah kriteria untuk dimasukkan dalam sampel didefinisikan dengan jelas?	√			
2. Apakah subyek penelitian dan pengaturannya dijelaskan secara rinci?	√			
3. Apakah paparan diukur dengan cara yang valid dan dapat diandalkan?	√			
4. Apakah objektif, kriteria standar digunakan untuk pengukuran kondisi?	√			
5. Apakah faktor perancu diidentifikasi?	√			
6. Apakah strategi untuk menangani faktor perancu dinyatakan?	√			
7. Apakah hasil diukur dengan cara yang valid dan dapat diandalkan?	√			
8. Apakah analisis statistik yang sesuai digunakan?	√			

10. Critical Appraisal Systematic Review* : *The relationship between Burnout, Self esteem, and Professional life quality of Nurese

Instrumen Joanna Briggs Institute (JBI)

Critical Appraisal Checklist for Analytical Cross Sectional Studies

Reviwer : Ariep Padilah Date : Juli 2020

Author : Unal Erkorkmaz, dkk Year : 2018

Record Number : DOI : 10.19271/jcpsp.2018.07.549

	Yes	No	Unclear	Not applicable
1. Apakah kriteria untuk dimasukkan dalam sampel didefinisikan dengan jelas?	√			
2. Apakah subyek penelitian dan pengaturannya dijelaskan secara rinci?	√			
3. Apakah paparan diukur dengan cara yang valid dan dapat diandalkan?	√			
4. Apakah objektif, kriteria standar digunakan untuk pengukuran kondisi?	√			
5. Apakah faktor perancu diidentifikasi?	√			
6. Apakah strategi untuk menangani faktor perancu dinyatakan?	√			
7. Apakah hasil diukur dengan cara yang valid dan dapat diandalkan?	√			
8. Apakah analisis statistik yang sesuai digunakan?	√			

11. Critical Appraisal Systematic Review* : *Is Self-Esteem Actually the Protective Factor of Nursing Burnout?

Instrumen Joanna Briggs Institute (JBI)

Critical Appraisal Checklist for Analytical Cross Sectional Studies

Reviwer : Ariep Padilah Date : Juli 2020

Author : Georgios Manomenidis, dkk Year : 2017

Record Number : ISSN : 1792-037X (Online). ISSN : 1791-5021 (Printed)

	Yes	No	Unclear	Not applicable
1. Apakah kriteria untuk dimasukkan dalam sampel didefinisikan dengan jelas?	√			
2. Apakah subyek penelitian dan pengaturannya dijelaskan secara rinci?	√			
3. Apakah paparan diukur dengan cara yang valid dan dapat diandalkan?	√			
4. Apakah objektif, kriteria standar digunakan untuk pengukuran kondisi?	√			
5. Apakah faktor perancu diidentifikasi?	√			
6. Apakah strategi untuk menangani faktor perancu dinyatakan?	√			
7. Apakah hasil diukur dengan cara yang valid dan dapat diandalkan?	√			
8. Apakah analisis statistik yang sesuai digunakan?	√			

12. ***Critical Appraisal Systematic Review* : *Do Low Self-Esteem and High Stress Lead to Burnout Among HealthCare Workers? Evidence From a Tertiary Hospital in Bangalore, India***

Instrumen Joanna Briggs Institute (JBI)

Critical Appraisal Checklist for Analytical Cross Sectional Studies

Reviwer : Ariep Padilah Date : Juli 2020

Author : Avita R. Johnson, dkk Year : 2020

Record Number : DOI : https://doi.org/10.1016/j.shaw.2020.05.009

	Yes	No	Unclear	Not applicable
1. Apakah kriteria untuk dimasukkan dalam sampel didefinisikan dengan jelas?	√			
2. Apakah subyek penelitian dan pengaturannya dijelaskan secara rinci?	√			
3. Apakah paparan diukur dengan cara yang valid dan dapat diandalkan?	√			
4. Apakah objektif, kriteria standar digunakan untuk pengukuran kondisi?	√			
5. Apakah faktor perancu diidentifikasi?	√			
6. Apakah strategi untuk menangani faktor perancu dinyatakan?	√			
7. Apakah hasil diukur dengan cara yang valid dan dapat diandalkan?	√			
8. Apakah analisis statistik yang sesuai digunakan?	√			

B. CONQUAL SUMMARY OF FINDINGS EXAMPLE

Jurnal 1
Systematic Review title : *Association of burnout syndrome and global self-esteem among Polish nurses*. *Archives of Medical Science* **Populasi :** 1.806 perawat **Phenomene of Interest :**. *Burnout* adalah sindrom psikologis kelelahan emosional dan kelelahan yang mungkin terjadi pada orang yang bekerja dengan orang lain dengan cara tertentu seperti Perawat dan kebanyakan kejadian ini dipengaruhi oleh faktor keperibadian seperti harga diri. **Context :** Perawat

Systematic Finding **(Temuan Sistematis)**	***Type of Research*** **(jenis penelitian)**	***Dependability*** **(keteguhan/Hal yang dapat dipercaya)**	***Creadibility*** **(Kepercayaan)**	***Comments***
Didapatkan bahwasanya *self esteem* merupakan faktor yang dapat mempengaruhi kepribadian dan mental pada seseorang dan termasuk *burnout* pada perawat disebutkan dipengaruhi oleh *self esteem* nya seseorang,	Kuantitaif Analisis Korelasi	*High* (Tinggi)	Seluruh Pertanyaan 8 Yes 0 No	**Nilai rekomendasi nilai JBI berdasarkan FAME termasuk kedalam rekomendasi kuat (*Grade* A).

seperti terlihat di nilai koefisien uji *chisquare* : ada hubungan yang signifikan secara statistik *self-esteem (*variabel independen) dan *burnout* (variabel dependen).				

Jurnal 2
Systematic Review title : *The Burden of Burnout Syndrome in Pediatric Intensive Care Unit and Pediatric Emergency Department: A Multicenter Evaluation. Pediatric Emergency Care.* **Populasi :** 570 Partisipan **Phenomene of Interest :**. *Burnout* paling banyak terdeteksi di kalangan profesional seperti dokter, perawat, spesialis layanan sosial, guru, atau pengacara. Penyedia layanan kesehatan adalah salah satu kelompok pekerjaan paling berisiko yang mungkin sering dihadapkan dengan *burnout* **Context :** Tenaga Kesehatan

Systematic Finding **(Temuan Sistematis)**	***Type of Research*** **(jenis penelitian)**	***Dependability*** **(keteguhan/Hal yang dapat dipercaya)**	***Creadibility*** **(Kepercayaan)**	***Comments***
Tingkat BS signifikan	Kuantitaif	*High* (Tinggi)	Seluruh	**Nilai

lebih tinggi pada karyawan muda, perempuan, dan pekerja yang memiliki 51 jam perminggu, yang memiliki gaji bulan rendah, yang lajang atau bercerai, tidak memiliki anak, tidak memiliki pengasuh anak, yang tidak tinggal di rumah, tidak olahrga dan sarapan teratur, mereka yang memiliki total waktu kerja kurang dari 1 tahun, tidak memiliki mobil dan hobbi. Nilai total keseluruhan *Burnout syndrome* lebih tinggi terjadi pada Perawat dibandingkan dengan dokter atau tenaga lainya.	*cross-sectional observasional*. Analisis Korelasi		Pertanyaan 8 Yes 0 No	rekomendasi nilai JBI berdasarkan FAME termasuk kedalam rekomendasi kuat (*Grade* A).

Jurnal 3
Systematic Review title : *Burnout assessment in nurses from a general emergency service*

Populasi : 32 Perawat IGD

Phenomene of Interest :. Dalam penelitian dengan berbagai profesi, sindrom Burnout disorot sebagai dominan di antara perawat. Burnout memengaruhi perawat di seluruh dunia dalam berbagai konteks pekerjaan. Ini membawa konsekuensi negatif bagi pekerja dan klien mereka, dan perasaan frustrasi, dingin dan acuh tak acuh.

Context : Perawat

Systematic Finding **(Temuan Sistematis)**	***Type of Research*** **(jenis penelitian)**	***Dependability*** **(keteguhan/Hal yang dapat dipercaya)**	***Creadibility*** **(Kepercayaan)**	***Comments***
Ditemukan bahwa semakin rendah usia dan semakin lama waktu bekerja di institusi, semakin tinggi tingkat *Burnout*. Pengalaman profesional yang lebih lama maka *Burnout* semakin rendah. *Burnout* lebih tinggi juga pada mereka yang memiliki pikiran untuk mengubah profesi mereka, lembaga	Kuantitaif Analisis deskriptif, korelasiona, dan *cross-sectional*	*High* (Tinggi)	Seluruh Pertanyaan 6 Yes 2 No	**Nilai rekomendasi nilai JBI berdasarkan FAME termasuk kedalam rekomendasi kuat (*Grade* A).

mereka atau layanan mereka.				

Jurnal 4
Systematic Review title : *Burnout among workers in emergency Departments in Palestinian hospitals: prevalence and associated factors*. *BMC health services research* **Populasi :** 569 Pekerja **Phenomene of Interest :**. Bekerja di IGD memerlukan tekanan dan stres kerja yang tinggi karena menyaksikan penderitaan manusia dan sifat pekerjaan yang tidak dapat diprediksi. Lingkungan ini menempatkan personel dalam risiko *Burnout* **Context :** Tenaga Kesehatan

Systematic Finding **(Temuan Sistematis)**	***Type of Research*** **(jenis penelitian)**	***Dependability*** **(keteguhan/Hal yang dapat dipercaya)**	***Creadibility*** **(Kepercayaan)**	***Comments***
Burnout lebih tinggi pada usia muda dibandingkan yang sudah tua, pernah mengalami tidakan kekerasan membuat *Burnout* lebih tinggi dan ada hubungan yang signifikan antara *Burnout* dengan	Kuantitatif, Desain *cross-sectional*	*High* (Tinggi)	Seluruh Pertanyaan 6 Yes 2 No	**Nilai rekomendasi nilai JBI berdasarkan FAME termasuk kedalam rekomendasi kuat (*Grade* A).

turnover intention. *Burnout* pada pekerja lebih tinggi di subdimensi *emosional exhaustion* dan depersonalisasi dan pada pencapaian prestasi rendah. Pada tingkat EE *burnout* lebih tinggi terjadi pada dokter dibandingkan perawat, dan pada tingkat Depersonalisasi perawat lebih tinggi dibandingkan dokter dan yang lainya.				

Jurnal 5
Systematic Review title : *Self-esteem, job satisfaction and burnout between general and psychiatric nursing staff* **Populasi :** 60 Perawat **Phenomene of Interest :**.Perawat berisiko mengalami masalah seperti *burnout* profesional dan rasa tidak puas tentang pekerjaan mereka. Faktor penyebab *burnout* di kalangan profesional adalah multi-faktorial, mulai dari latar belakang sosial-demografis dan pekerjaan hingga karakteristik kepribadian seseorang

Context : Perawat

Systematic Finding **(Temuan Sistematis)**	***Type of Research*** **(jenis penelitian)**	***Dependability*** **(keteguhan/Hal yang dapat dipercaya)**	***Creadibility*** **(Kepercayaan)**	***Comments***
Faktor penyebab *burnout* di kalangan profesional adalah multi-faktorial, mulai dari latar belakang sosial-demografis dan pekerjaan hingga karakteristik kepribadian seseorang. Perawat umum memiliki jumlah tanggungan yang jauh lebih tinggi daripada perawat psikiatri. perawat psikiatrik ditemukan memiliki tingkat harga diri yang lebih tinggi daripada perawat umum. Perawat Umum memiliki tingkat kepuasan kerja yang	Kuantitatif , Studi *cross-sectional*, statistik deskriptif.	*High* (Tinggi)	Seluruh Pertanyaan 8 Yes 0 No	**Nilai rekomendasi nilai JBI berdasarkan FAME termasuk kedalam rekomendasi kuat (*Grade* A).

secara signifikan lebih rendah dari pada Perawat psikiatri Perawat Umum memiliki tingkat *burnout* pekerjaan yang jauh lebih tinggi daripada perawat psikiatri.				

Jurnal 6
Systematic Review title : *Analysis of the mediating role of self-efficacy and self-esteem on the effect of workload on Burnout's influence on nurses' plans to work longer* **Populasi :** 1.307 Perawat **Phenomene of Interest :**. Risiko yang lebih kuat untuk profesional kesehatan, karena kontak permanen dengan penderitaan dan penyakit orang lain membuat pengaturan pekerjaan mereka sangat tertekan secara emosional dan psikologis **Context :** Perawat

Systematic Finding **(Temuan Sistematis)**	***Type of Research*** **(jenis penelitian)**	***Dependability*** **(keteguhan/Hal yang dapat dipercaya)**	***Creadibility*** **(Kepercayaan)**	***Comments***
Self-efficacy yang	Kuantitatif.	*High* (Tinggi)	Seluruh	**Nilai

tinggi menunjukan bahwa *self esteem* juga tinggi. Perawat yang mengalami *Burnout* cenderung dikarenakan beban kerjanya sementara *self- efficacy* dan *self esteem* bertindak sebagai variabel pelindung sehingga *self-efficacy* dan *self-esteem* dengan *burnout* menunjukan hasil negatif, namun *self efficacy dan self esteem* secara tidak langsung dapat mempengaruhi beban kerja.	Analisis korelasi		Pertanyaan 6 Yes 2 No	rekomendasi nilai JBI berdasarkan FAME termasuk kedalam rekomendasi kuat (*Grade* A).

Jurnal 7
Systematic Review title : *Burnout in health professionals according to their self-esteem, social support and empathy profile.* **Populasi :** 719 Profesional kesehatan **Phenomene of Interest :** Profesional di bidang perawatan kesehatan berada dalam situasi yang bisa menjadi sumber stres dan kadang-kadang mengembangkan *burnout syndrome*.

Harga diri, dukungan sosial, dan empati adalah variabel yang mengintervensi dan memengaruhi penampilan sindrom ini. **Context :** Tenaga Kesehatan

Systematic Finding **(Temuan Sistematis)**	***Type of Research*** **(jenis penelitian)**	***Dependability*** **(keteguhan/Hal yang dapat dipercaya)**	***Creadibility*** **(Kepercayaan)**	***Comments***
Setiap variabel dalam kelaster memperlihatkan nilai yang berbeda anatara s*elf esteem*, empati, dan dukungan sosial. Serta perbedaan yang signifikan dalam skor *burnout* ditemukan di antara *cluster*. Disebutkan bahwa *self esteem* adalah varibel yang sangat berpengaruh akan keperibadian seseorang, sehingga kejadian *burnout syndrome* pada tenaga kesehatan pun sangat	Kuanititatif, analisis korelasi	*High* (Tinggi)	Seluruh Pertanyaan 6 Yes 2 No	**Nilai rekomendasi nilai JBI berdasarkan FAME termasuk kedalam rekomendasi kuat (*Grade* A).

dipengaruhi dengan kondisi *self esteem* pada seseorang.				

Jurnal 8
Systematic Review title : *Effects of Traumatic Events, Compassion Fatigue, Self-esteem, and Compassion Satisfaction on Burnout of Nurses in Emergency Department (ED)* **Populasi :** 170 Perawat IGD **Phenomene of Interest :**. Tidak seperti departemen lain, perawat ruang gawat darurat memerlukan keterampilan keperawatan tingkat tinggi, dan selalu terpapar dengan faktor lingkungan kerja dan berbahaya dalam situasi tegang, yang mengakibatkan kesulitan fisik dan mental serta rasa sakit, yang mengakibatkan stress yang akhirnya mengalami *burnout* **Context :** Perawat

Systematic Finding **(Temuan Sistematis)**	***Type of Research*** **(jenis penelitian)**	***Dependability*** **(keteguhan/Hal yang dapat dipercaya)**	***Creadibility*** **(Kepercayaan)**	***Comments***
Karakteristik *Burnout* perawat IGD tergantung pada jenis kelamin, posisi, kepuasan kerja, kepuasaan ditempat kerja. Faktor-faktor	Kuantitatif, analisis statistic deskriptif korelasi	*High* (Tinggi)	Seluruh Pertanyaan 8 Yes 0 No	**Nilai rekomendasi nilai JBI berdasarkan FAME termasuk kedalam rekomendasi

yang mempengaruhi *burnout* adalah harga diri (*self esteem),* kepuasan dan kelelahan (*fatigue).*				kuat (*Grade* A).

Jurnal 9
Systematic Review title : *Effects of Workplace Bullying, Job Stress, Self-esteem, and Burnout on the Intention of University Hospital Nurses to Keep Nursing Job* **Populasi :** 229 perawat **Phenomene of Interest :**. Beban kerja yang terus meningkat dan kejadian *burnout* meningkat juga menyebabkan para perawat hamper sebagian ingin berhenti dari pekerjaannya. **Context :** Perawat

Systematic Finding **(Temuan Sistematis)**	***Type of Research*** **(jenis penelitian)**	***Dependability*** **(keteguhan/Hal yang dapat dipercaya)**	***Creadibility*** **(Kepercayaan)**	***Comments***
Temuan menunjukkan bahwa faktor-faktor yang mempengaruhi niat retensi adalah usia, posisi saat ini, dan status kesehatan, sedangkan *self esteem*	Kuantitaif Analisis Korelasi	*High* (Tinggi)	Seluruh Pertanyaan 8 Yes 0 No	**Nilai rekomendasi nilai JBI berdasarkan FAME termasuk kedalam rekomendasi

dan *burnout* adalah faktor baru yang mempengaruhi niat retensi.				kuat (*Grade* A).

Jurnal 10
Systematic Review title : *The relationship between Burnout, Self esteem, and Professional life quality of Nurese* **Populasi :** 131 Perawat **Phenomene of Interest :**. *Burnout* yang berkepanjangan, seperti halnya kelelahan emosional dan pencapaian pribadi dapat menyebabkan gejala yang dapat mempengaruhi secara negatif kualitas kerja profesional dan kehidupan mental perawat. **Context :** Perawat

Systematic Finding **(Temuan Sistematis)**	***Type of Research*** **(jenis penelitian)**	***Dependability*** **(keteguhan/Hal yang dapat dipercaya)**	***Creadibility*** **(Kepercayaan)**	***Comments***
Nilai *burnout* total perawat didapatkan rendah untuk kelelahan emosional dan depersonalisasi, tinggi untuk prestasi pribadi, dan *burnout* pada perawat dapat	Kuantitaif *cross-sectional observasional*. Analisis Korelasi	*High* (Tinggi)	Seluruh Pertanyaan 8 Yes 0 No	**Nilai rekomendasi nilai JBI berdasarkan FAME termasuk kedalam rekomendasi kuat (*Grade* A).

memengaruhi kepuasan kasih sayang dan keberhasilan individu secara negatif.				

Jurnal 11
Systematic Review title : *Is Self-Esteem Actually the Protective Factor of Nursing Burnout?* **Populasi :** 183 Perawat **Phenomene of Interest :** Perawat yang memilikikeperibadian kurang baik, seperti halnya harga diri yang rendah rentan mengalami maalah dalam pekerjaannya dan hal ini bisa membuat perawat mengalami *burnout* **Context :** Perawat

Systematic Finding **(Temuan Sistematis)**	***Type of Research*** **(jenis penelitian)**	***Dependability*** **(keteguhan/Hal yang dapat dipercaya)**	***Creadibility*** **(Kepercayaan)**	***Comments***
Hubungan *self esteem* dan *burnout* bernilai positif dengan ketiga subdimensi *burnout.* Terlebih pada pencapain prestasi pribadi disebutkan perawat yang memiliki	Kuantitaif *cross-sectional observasional*. Analisis Korelasi	*High* (Tinggi)	Seluruh Pertanyaan 8 Yes 0 No	**Nilai rekomendasi nilai JBI berdasarkan FAME termasuk kedalam rekomendasi kuat (*Grade* A).

percaya diri yang rendah maka *self esteem* rendah dan *burnout* tinggi. Oleh sebab itu s*elf esteem* merupakan faktor yang kuat dalam mempengaruhi kejadian *Burnout* pada perawat.				

Jurnal 12
Systematic Review title : *Do Low Self-Esteem and High Stress Lead to Burnout Among HealthCare Workers? Evidence From a Tertiary Hospital in Bangalore, India* **Populasi :** 306 Perawat **Phenomene of Interest :**. Harga diri rendah dapat menjadi masalah di antara petugas layanan kesehatan karena sistem medis hirarkis. Petugas kesehatan juga berada dalam lingkungan tekanan tinggi yang dapat menyebabkan stres dan *burnout*. **Context :** Perawat

Systematic Finding **(Temuan Sistematis)**	***Type of Research*** **(jenis penelitian)**	***Dependability*** **(keteguhan/Hal yang dapat dipercaya)**	***Creadibility*** **(Kepercayaan)**	***Comments***
Usia yang lebih muda didapatkan memiliki	Kuantitaif *cross*-	*High* (Tinggi)	Seluruh Pertanyaan	**Nilai rekomendasi

ingkat stress lebih tinggi dengan *self esteem* yang rendah dan mengalami *Burnout.* Analisis yang menunjukan *self esteem* yang endah memberikan efek langsung pada kejadian *Burnout* dengan efek penyertanya adalah stress.	*sectional observasion al*. Analisis Korelasi		8 Yes 0 No	nilai JBI berdasarkan FAME termasuk kedalam rekomendasi kuat (*Grade* A).

C. PENILAIAN REKOMENDASI JOANNA BRIGS INSTITUTE (JBI)

NO	JURNAL	NILAI REKOMENDASI
1.	*Association of burnout syndrome and global self-esteem among Polish nurses. Archives of Medical Science*	A
2.	*The Burden of Burnout Syndrome in Pediatric Intensive Care Unit and Pediatric Emergency Department: A Multicenter Evaluation. Pediatric Emergency Care.*	A
3.	*Burnout assessment in nurses from a general emergency service*	A
4.	*Burnout among workers in emergency Departments in Palestinian hospitals: prevalence and associated factors. BMC health services research*	A
5.	*Self-esteem, job satisfaction and burnout between general and*	A

	psychiatric nursing staff	
6.	*Analysis of the mediating role of self-efficacy and self-esteem on the effect of workload on Burnout's influence on nurses' plans to work longer*	A
7.	*Burnout in health professionals according to their self-esteem, social support and empathy profile.*	A
8.	*Effects of Traumatic Events, Compassion Fatigue, Self-esteem, and Compassion Satisfaction on Burnout of Nurses in Emergency Department (ED)*	A
9.	*Effects of Workplace Bullying, Job Stress, Self-esteem, and Burnout on the Intention of University Hospital Nurses to Keep Nursing Job*	A
10.	*The relationship between Burnout, Self esteem, and Professional life quality of Nurese*	A
11.	*Is Self-Esteem Actually the Protective Factor of Nursing Burnout?*	A
12.	*Do Low Self-Esteem and High Stress Lead to Burnout Among HealthCare Workers? Evidence From a Tertiary Hospital in Bangalore, India*	A

Lampiran 2

CATATAN BIMBINGAN SKRIPSI

Nama : Ariep Padilah

Judul : Hubungan *Self esteem* dengan kejadian *Burnout Syndrome* pada Perawat Instalasi Gawat Darurat : *Literature Review*

Pembimbing utama : Rd. Siti Jundiyah, S.Kp., M.Kep

Pembimbing pendamping : Sri Wulan Megawati, S.Kep., Ners., M.Kep

No	Hari/Tanggal	Catatan Bimbingan	Paraf
1.	-	Persamaan persepsi dan sistematika bimbingan	R. Siti Jundiah, S.Kp., M.Kep
2.	Senin, 02/03/2020	Perbaiki Bab 1, faktor-faktor *Burnout*, fenomena RS	R. Siti Jundiah, S.Kp., M.Kep
3.	Senin, 09/03/2020	Data RS + Fenomena *self esteem* nya, Kerangka Konseptual teori – Bab 1 perbaiki	R. Siti Jundiah, S.Kp., M.Kep
4.	Jum'at, 20/03/2020	Lanjutkan ke Bab 2 + 3	R. Siti Jundiah, S.Kp., M.Kep
5.	Rabu, 25/03/2020	Definisi Operasional & Konseptual, teknik analisa data, instrument. Penulisan hurus besar kecil, penulisan sesuaikan dengan juknis	R. Siti Jundiah, S.Kp., M.Kep
6.	Sabtu,	Pindah ke Literautre + pencarian	R. Siti Jundiah,

	04/04/2020	Jurnal	S.Kp., M.Kep
7.	Rabu, 08/04/2020	Perbaiki Bab 1 Hilangkan varibel karakteristik demografis Penulisan sumber Sesuaikan sistematika dengan Juknis	R. Siti Jundiah, S.Kp., M.Kep
8.	Kamis, 14/08/2020	Teknik Sampling, analisa data, populasi, critical appraisal. Perbaiki penulisan (sesuaikan dengan Juknis)	R. Siti Jundiah, S.Kp., M.Kep
9.	Jum'at, 17/04/2020	Acc Sidang Semianr Proposal + Perbaiki Draf, cara penulisan dan kelengkapan lainya	R. Siti Jundiah, S.Kp., M.Kep
Rabu, 22 April 2020 Pelaksanaan Sidang Seminar Proposal			
10.	Selasa, 19/05/2020	Revisi proposal penelitian Penapisan faktor lain belum tajam Variabel keduanya belum tergambar jelas Tambahkan jurnal self esteem-burnout Kerangka Bab 4 (juknis)	R. Siti Jundiah, S.Kp., M.Kep
12.	Kamis, 04/06/2020	Perbaikan hasil revisi	R. Siti Jundiah, S.Kp., M.Kep
13.	Kamis, 18/06/2020	Konsultasi Bab 4 (Juknis)	R. Siti Jundiah, S.Kp., M.Kep
14.	Senin, 29/06/2020	Bab 4 Jurnal sebagian masih kurang nyambung. Baca di point pembahasan jurnalnya.	R. Siti Jundiah, S.Kp., M.Kep

15.	Senin, 06/07/2020	Bab 4 Kata-kata di table masih belum sesuai Pahami dengan benar jurnalnya Pembahasan belum sesuai dengan judul Gunakan bahasa sendiri tanpa merubah maknanya.	R. Siti Jundiah, S.Kp., M.Kep
16.	Jum'at, 10/07/2020	Persamaan persepsi keseluruhan Litrev Bab 3 diubah setiap kata yang akan menjadi sudah terlaksana. Prisma flow di isi dan di deskripsikan. Hasil critical appraisal dielaskan Jelaskan cara mendapatkan sample nya. Etika berikan contoh	R. Siti Jundiah, S.Kp., M.Kep
17.	Kamis, 16/07/2020	Bab 4 dan 5 Pembahasan lebih fokus Kaji kembali penulisan SPOK nya harus tepat Lengkapi Draft	R. Siti Jundiah, S.Kp., M.Kep
18.	Jum'at, 23/07/2020	Point evaluasi kelayakan menjelaskan hasil yang didapatkan, bukan hanya penjelasan CASP nya. Cek penulisan Acc Sidang	R. Siti Jundiah, S.Kp., M.Kep

CATATAN BIMBINGAN SKRIPSI

Nama : Ariep Padilah

Judul : Hubungan *Self esteem* dengan kejadian *Burnout Syndrome* pada Perawat Instalasi Gawat Darurat : *Literature Review*

Pembimbing utama : Rd. Siti Jundiyah, S.Kp., M.Kep

Pembimbing pendamping : Sri Wulan Megawati, S.Kep., Ners., M.Kep

No	Hari/Tanggal	Catatan Bimbingan	Paraf
1.	Rabu, 26/02/2020	Sistematika Bimbingan + Fenomena dan Judul	Sri Wulan Megawati, S.Kep., Ners., M.kep
2.	Senin, 02/03/2020	Faktor-faktor Burnout, konsep burnout parafrase, fenomena dilapangan	Sri Wulan Megawati, S.Kep., Ners., M.kep
3.	Senin, 09/03/2020	Perkuat fenomena dan judul dengan data-data. Perbaiki Bab 1	Sri Wulan Megawati, S.Kep., Ners., M.kep
4.	Jum'at, 20/03/2020	Lanjutkan ke Bab 2 + 3	Sri Wulan Megawati, S.Kep., Ners.,

			M.kep
5.	Sabtu, 04/04/2020	Pindah ke Literautre + pencarian Jurnal Jurnal internasionalnya harus lebih banyak.	Sri Wulan Megawati, S.Kep., Ners., M.kep
6.	Rabu, 08/04/2020	Perbaiki Bab 3 seuaikan dengan Juknis dan juga pembimbing 1	Sri Wulan Megawati, S.Kep., Ners., M.kep
7.	Jum'at, 17/04/2020	Acc Sidang Proposal	Sri Wulan Megawati, S.Kep., Ners., M.Kep
Rabu, 22 April 2020 Pelaksanaan Sidang Seminar Proposal			
8.	Kamis, 07/05/2020	Revisi proposal Anatar varibael diperkuat Jelaskan perawat IGD dengan dampak terjadi burnout.	Sri Wulan Megawati, S.Kep., Ners., M.Kep
9.	Selasa, 19/05/2020	Perbaikan revisi proposal	Sri Wulan Megawati, S.Kep., Ners., M.Kep
10.	Sabtu, 06/06/2020	Bab 4 Sesuaikan dengan juknis yang disediakan kampus Fokus jurnal dengan variabel penelitian	Sri Wulan Megawati, S.Kep., Ners., M.Kep
11.	Senin,	Bab 4	Sri Wulan

	29/06/2020	Hasil di table diperjelas Buat per point Variabel self esteem pada perawat IGD masih kurang	Megawati, S.Kep., Ners., M.Kep
12.	Senin, 06/07/2020	Pembahasan Bahasan pembahasan lebih fokus Kaji penulisan Pembahasan sesuaikan dengan tujuan	Sri Wulan Megawati, S.Kep., Ners., M.Kep
13.	Selasa, 14/07/2020	Bab 5 dan Abstrak Kesimpulan belum sesuai dengan Tujuan Huruf, spasi dll (kaji penulisan) Penuhi kaidah IMRAD Tambahkan tahun pada referensi	Sri Wulan Megawati, S.Kep., Ners., M.Kep
14.	Selasa, 21/07/2020	Periksa lagi secara keseluruhan kata dan yang lainya. Acc Sidang Akhir	Sri Wulan Megawati, S.Kep., Ners., M.Kep

Lampiran 3

LEMBAR CATATAN PENGUJI

Nama : Ariep Padilah

Judul : Hubungan *Self esteem* dengan kejadian *Burnout Syndrome* pada Perawat Instalasi Gawat Darurat : *Literature Review*

Penguji I : Sumbara, S.Kep., Ners., M.Kep

Penguji II : Nur Intan Hayati Husnul Khotimah, S.Kep., Ners., M.Kep

No	Hari/Tanggal	Catatan	Paraf
1.	Rabu, 22 April 2020	**Sidang Proposal** BAB 1 1. Perbaiki kata-kata judul, agar mudah dipahami 2. Perbaiki sistematika penulisan seperti sumber 3. Contoh dampak *Burnout* seperti *Turnover* 4. Kehususan karakteristik perawat IGD BAB 2 5. Konsistensi point-point di BAB 2 BAB 3	Sumbara, S.Kep., Ners., M.Kep

		6. Kejelasan Jenis pendekatan penelitian yang mau digunakan. 7. Penulisan kaji kembali 8. Etika penelitian harus teori dan juga aplikatifnya	
2.		**Sidang Proposal** BAB 1 1. Sistematika penulisan, paragraph, dan kalimat 2. Variabel *self esteem* masih kurang muncul 3. Perbedaan perawat IGD, Poli, Ranap dan yang lain kurang tajam 4. Tambahkan jurnal yang mendukung kedua variabelnya BAB 2 5. Kerangka konseptual diperjelas seperti pada point *self esteem* BAB 3 6. Jumlah populasi dan sample jangan dulu dimasukan 7. Prisma flow kosongkan 8. Sitasi lihat indexnya 9. Etika penelitian lebih diperjelas lagi 10. Keseuaian *instrument critical*	Nur Intan Hayati Husnul Khotimah, S.Kep., Ners., M.Kep
3.	Rabu, 05	**Sidang Skripsi**	Sumbara,

	Agustus 2020	1. Penulisan Draft disesuaikan dengan juknis 2. Abstrak point D masih kurang tajam. 3. Tambahan daftar singkatan dan lampiran BAB 1 & 2 : Aman BAB 3 4. Perjelas point tentang cara mendapatkan jurnal dari 13.000 sampai ke 12 5. Etika penelitian bahasanya masih ada yang bahasa proposal BAB 4 & 5 6. Daftar Pustaka sesuikan dengan juknis	S.Kep., Ners., M.Kep
4.		**Sidang Skripsi** 1. Abstrak sesuaikan dengan kaidah IMRAD, masih ada yang kurang dan bahasa inggrisnya masih ada yang kurang tepat. 2. Cover sesuikan dengan juknis BAB 1 & 2 Aman BAB 3 3. Perjelas cara mendapatkan 12 artikel sample 4. Etika point plagiarisme jelaskan proses cek plagiat juga baik dari	Nur Intan Hayati Husnul Khotimah, S.Kep., Ners., M.Kep

		kampus atau sendiri. 5. Critical appraisal yang digunakan kurang tepat. BAB 4 6. Analisis pembahasan diperjelas juga tentang jumlah sample yang berbeda BAB 5 7. Saran bagi keperawatan masih kurang sesuai	

Lampiran 4

LEMBAR PERSETUJUAN PEMBIMBING DAN PENGUJI

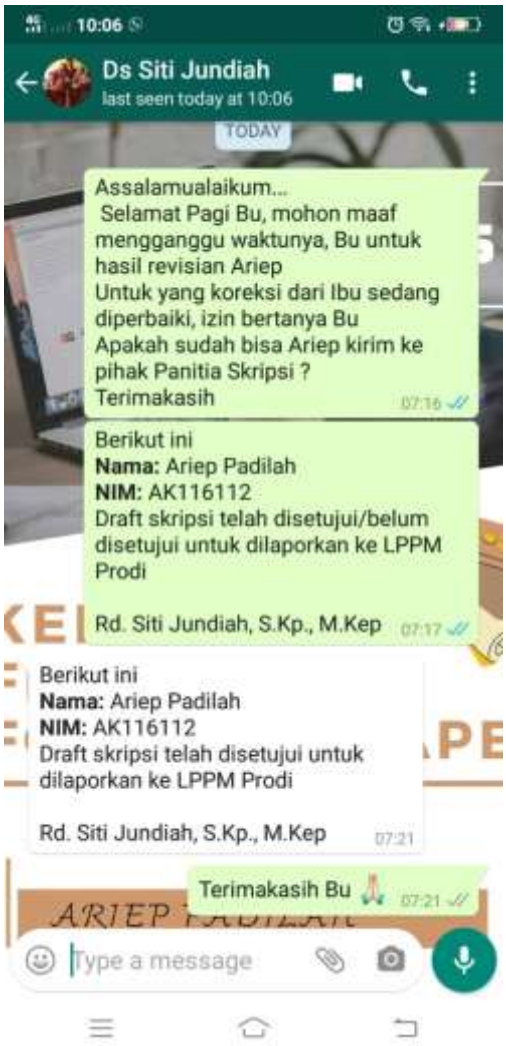
1. **Pembimbing 1 : Rd. Siti Jundiah, S.Kp., M.Kep**

   Nama : Ariep Padilah

   NIM : AK116112

   Draft Skripsi telah disetujui untuk dilaporkan ke LPPM Prodi

   R. Siti Jundiah, S.Kp., M.Kep



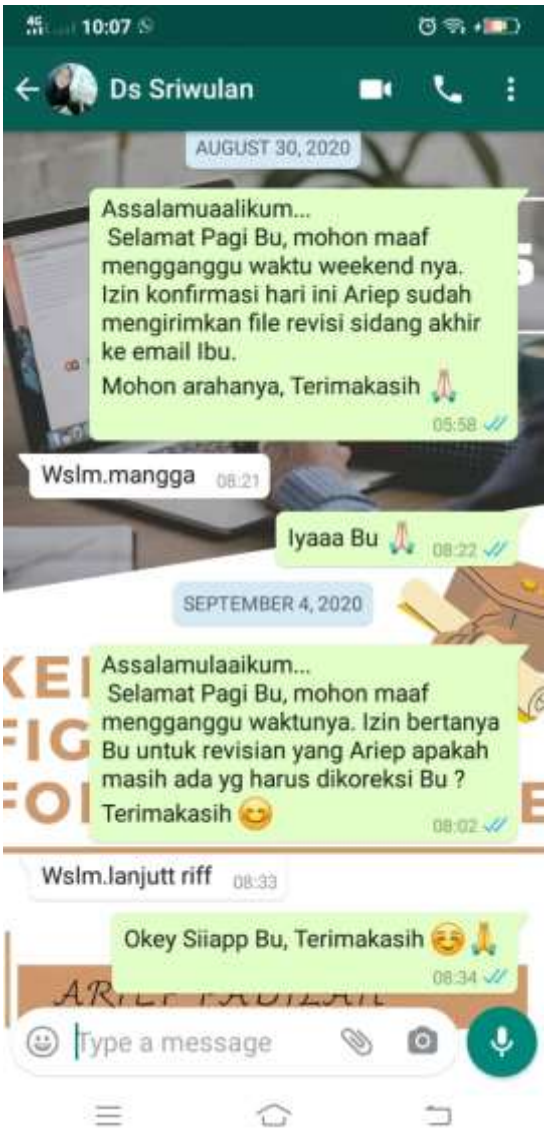
2. **Pembimbing 2 : Sri Wulan Megawati, S.kep., Ners., M.Kep**

Nama : Ariep Padilah

NIM : AK116112

Draft Skripsi telah disetujui untuk dilaporkan ke LPPM Prodi

Sri Wulan Megawati, S.Kep., Ners., M.Kep



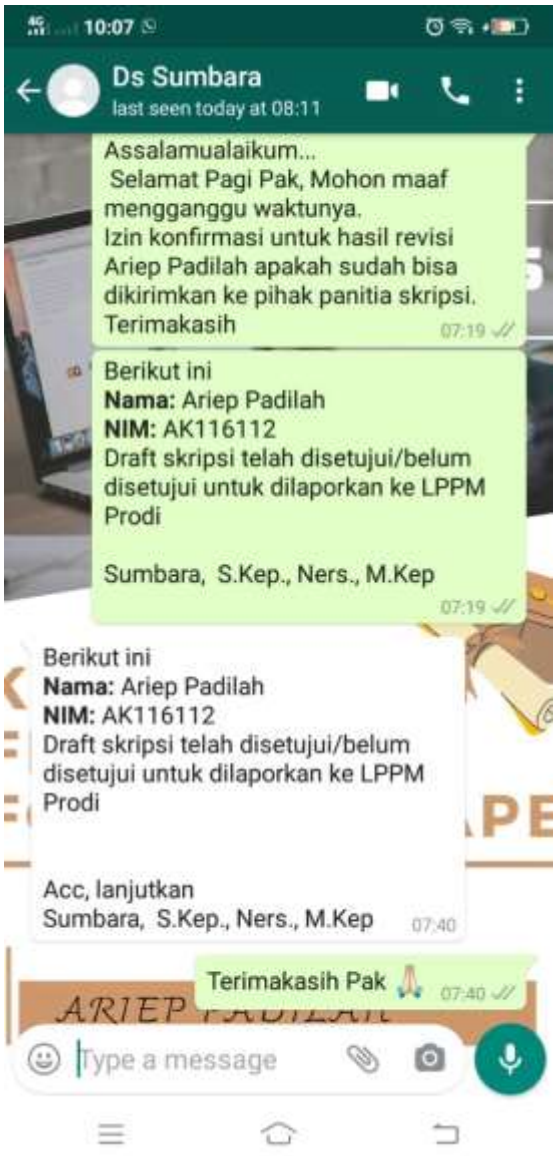
3. **Penguji 1 : Sumbara, S.Kep., Ners., M.Kep**

Nama : Ariep Padilah

NIM : AK116112

Draft Skripsi telah disetujui untuk dilaporkan ke LPPM Prodi

Sumbara, S.Kep., Ners., M.Kep



4. **Penguji 2 : Nur Intan Hayati Husnul Khotimah, S.Kep., Ners., M.Kep**

Nama : Ariep Padilah

NIM : AK116112

Draft Skripsi telah disetujui untuk dilaporkan ke LPPM Prodi

Nur Intan Hayati Husnul Khotimah, S.Kep., Ners., M.Kep

Lampiran 5

BUKTI MENJADI OPONEN

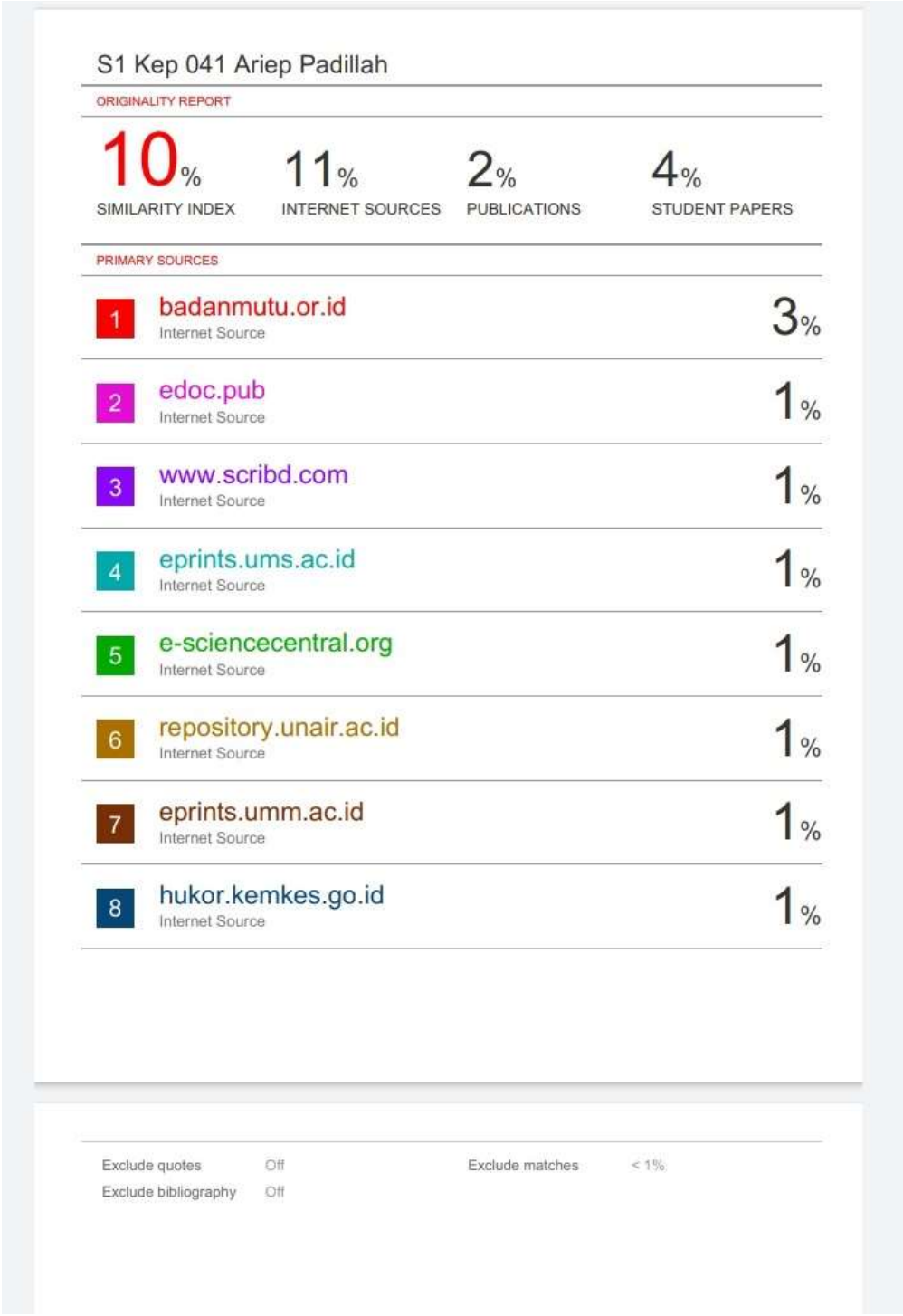
Nama : Ariep Padilah

Nim : AK.1.16.086

No	Hari/Tanggal	Penyaji	Judul Proposal penelitian	Tanda Tangan Moderator	Ket
1	21 April 2020	Lisnasari	Studi Literatur : Pengaruh *Green Color Breathing* Therapy Terhadap Tekanan Darah Pada Penderita Hipertensi		Apa alasan mengambil terapi *green color breathing* dibandingkan dengan terapi non farmakologi lainya ?

Lampiran 6

Lembar Pernyataan Bebas Plagiarisme



S1 Kep 041 Ariep Padillah

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Lempiran 7

Sample Artikel

1. ***The relationship between Burnout, Self esteem and Profesional Life Quality of Nurses***

CLINICAL PRACTICE ARTICLE

The Relationship between Burnout, Self-Esteem and Professional Life Quality of Nurses

Unal Erkorkmaz[1], Ozlem Dogu[2] and Nursan Cinar[3]

ABSTRACT

Objective: To evaluate the correlation between burnout, self-esteem and quality of life among nurses.
Study Design: Analytical, cross-sectional study.
Place and Duration of Study: Sakarya Training and Research Hospital, Turkey, in 2013.
Methodology: The sample was made-up of 131 volunteering nurses after obtainnig informed written consent from the participants, ethical committee, and corresponding institutions. Data were collected by personal information form (21 questions), Maslach Burnout Inventory (MBI-22 items), Rosenberg Self-Esteem Scale (RSES-10 items), Professional Quality Of Life Scale (ProQOL-30 items).
Results: The scales were analysed in terms of internal consistency. Cronbach Alpha coefficients were determined as reliable for our sample. MBI 3 subscale total scores of the participant nurses were low for emotional exhaustion and depersonalization, high for personal accomplishment. Total score from RSES was 15.32 ±3.70. Total scores from 3 subscales of ProQOL were 29.78 ±9.02 for compassion satisfaction, 24.65 ±5.75 for burnout, and 15.12 ±6.54 for compassion fatigue.
Conclusion: In this study, it was detected that burnout in nurses affected compassion satisfaction and individual success negatively.

Key Words: *Nurses. Burnout. Self-esteem. Quality of life. Relationship.*

INTRODUCTION

Professional quality of life for those providing care has been an issue of growing interest over the past 25 years.[1] Prolonged fatigue, emotional exhaustion and personal accomplishment caused by work can cause symptoms which can influence negatively over professional work quality and nurse's mental life. Quality of life comprises the individual's physical functions, psychological state, social relations within the family or in the community, how much she/he is influenced by the environment, and how much this situation affects the individual's functionality. Health, overlapping with the definition of quality of life that is well-being, suggests that life quality scale can also be used in healthcare.[2,3]

Burnout syndrome includes negative personal reactions towards the difficulties faced in career.[4] Burnout is accepted as an occupational hazard exposure, which people working in face to face jobs such as education or healthcare services.[5,6] Burnout among nurses who are effective members of healthcare may hinder their duties of caregiving.[7]

Department of Biostatistics[1] / Fundamentals[2] / Pediatrics[3], Sakarya University, Sakarya, Turkey.

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Received: May 29, 2017; Accepted: March 21, 2018.

Low self-esteem is an underlying cause of submissive behavior. Necessary communication skills and behaviors for work are particularly come into prominence in occupations based on interaction such as nursing.[2-6] Nurses, as a member of healthcare staff, should have good communication with both their team mates and the patient. They should provide a holistic and desirable nursing care, incorporate the patient and his/her family into the caring process, have skills of protecting the patient, and leading the process.[8]

The aim of this study was to examine the correlation between burnout, self-esteem and quality of life among the nursing staff of Training and Research Hospital, Sakarya, Turkey.

METHODOLOGY

It was an analytical and cross-sectional study. The population of the study was consisted of the whole nursing staff of Training and Research Hospital, Sakarya Metropol Western City, Turkey in 2013. Nurse who patrticipated voluntarily completed the forms used for the research. Hospital authorities were called and an appointment was made. Units were visited on the designated day and time, giving information about the aim of the study. Nurses were visited in the units, they were informed about the study and their questions were answered.

The data were collected via a Personal Information Form (21 items), Maslach Burnout Inventory (MBI-22 items), Rosenberg Self-Esteem Scale (RSES-10 items) and

Professional Quality Of Life Scale (ProQOL-30 items). Forms related to the study were distributed to nurses in a closed envelope by visiting their units and collected in envelope again two weeks later.

Personal Information Form, including 21 questions, were prepared by the researchers themselves. Personal Information Form includes items like, age, experience, years in department, marital status, educational status, and if they have any children.

Maslach Burnout Inventory (MBI) was developed by Maslach and Jason. Its reliability and validity in Turkish was performed by Cam (1992) and Ergin (1992). Being a 5-items Likert scale (0: Never; 1: Rarely; 2: Sometimes; 3: Often; 4: Always), it includes 22 questions with three dimensions: Emotional Exhaustion (EE, 9 items: 1,2,3,6,8,13,14,16,20), Depersonalization (D, 5 items: 5,10,11,15,22), and Personal Accomplishment (PA, 8 items: 4,7,9,12,17,18,19,21).

Rosenberg Self-Esteem Scale (RSES) was used for the evaluation of self-esteem in our study. This scale was developed by Morris Rosenberg in 1965. Its Turkish validity and reliability was performed by Cuhadaroglu (1986), and its validity coefficient (Cronbach Alpha) was found to be 0.71.

Professional Quality Of Life Scale (ProQOL), it is a self-report assessment tool consisting of thirty items and three subscales. "Compassion satisfaction" is the first subscale and it is about the feeling of satisfaction and pleasure that a staff gets when he helps another person in need of assistance in a field related to her/his profession or business. The high score from this scale shows the level of satisfaction or pleasure of the helper.

The sample consisted of nurses who participated voluntarily and completed the forms used for the research. Ethical permission was obtained from the Ethical Committee, Sakarya University (71522473\ 050.01.04), and written consents from relevant institutions. Participants gave verbal consent for the use of their data for this study.

Scales used in the study were assessed by reliability analysis in terms of internal consistency and Cronbach Alpha coefficients were calculated. Kolmogorov-Smirnov test was used to evaluate whether the distribution of scales were normal. Two independent sample t-test or Mann-Whitney U test were used to compare the scales between two groups. One Way Analysis of Variance ANOVA or Kruskal Wallis Analysis of Variance were used for comparing the scales among groups. Spearman correlation coefficients were performed for relation among ProQOL, MBI and RBSO. Multiple linear regression analysis was used to determine the effect of MBI subscales and RBSO on ProQOL subscales. The scales were presented as the mean ± standard deviation or median [IQR]. A p-value <0.05 was considered significant. Analyses were performed using IBM SPSS Statistics, Version 23.0.

RESULTS

The scales used in this study were analysed in terms of internal consistency. Cronbach Alpha coefficients were calculated as 0.846, 0.526 and 0.717, respectively for the subscales of compassion satisfaction (CS), burnout and compassion fatigue (CF) of ProQOL; 0.836, 0.637 and 0.820 for emotional exaustion (EE), depersonalization and personal accomplishment (PA) subscales of MBI respectively, and 0.617 for RSES. According to these results, all three scales were determined as reliable for the sample (Table I).

Table I: Internal consistency coefficients (Cronbach Alpha), according to subscales.

Scales	Sub-scales	Cronbach Alpha (α)
ProQOL	Compassion Satisfaction (CS)	0.846
	Burnout	0.526
	Compassion Fatigue (CF)	0.717
MBI	Emotional Exhaustion (EE)	0.836
	Depersonalization	0.637
	Personal Accomplishment (PA)	0.820
RSES	Total	0.617

Demographical features of the nurses in the study were assessed; 87.0% of them (n=114) were females, 69.5 % were (n=91) younger than 25 years old, 57.3% were (n=75) married and 52.7 % of them (n=69) had children, 38.2% (n=50) had been working for 1-5 years, 69.5% (n=91) were graduates of university, 59.5% (n=78) worked more than 40 hours a week and 39.7% (n=52) stated that they had sleep quality with moderate sleep complaints.

Median [IQR] values of MBI's three subscales were 16.00 for EE [10.00] (min=2, max=34, low), 6.00 for depersonalization [6.00] (min=0, max=17, low) and 19.00 for PA [8.00] (min=1, max=28, high). Total score of RSES was 16.00 (3.00, min=5, max=30). ProQOL's three subscales were 30.00 for CS (11.00, min=9, max=50), 24.00 for burnout (7.00, min=13, max=48) and 15.00 for CF (10.00, min=1, max=37, Table II).

According to the comparisons made in terms of subscale total scores of demographical features; there was a significant difference between 25 years and younger, and 25 years and older in EE and depersonalization subscales of MBI (p=0.026 and 0.022, respectively) and burnout subscale of ProQOL (p=0.010). There was also significant difference between females and males in terms of PA subscale of MBI (p=0.046, Table II).

There was a significant correlation between EE which is a subscale of MBI and CF (r=-0.217, p=0.013), burnout (r=0.468, p<0.001) and CF (r=0.334, p=0.001) which are subscales of quality of life. The correlation between depersonalization and burnout (r=0.280, p<0.001), CF

(r=0.300, p<0.001) which is a subscale of quality of life was significant. The correlation between PA and CS (r=0.565, p<0.001) and burnout (r=0.385, p<0.001) which are subscales of ProQOL was significant, too (Table III).

Table II: The comparison between the scales and sociodemographic features.

Features	MBI			ProQOL			RSES
	Emotional exhaustion	Depersonalization	Personal accomplishment	Compassion satisfaction	Burnout	Compassion fatigue	
Overall	16 [10]	6 [6]	19 [8]	30 [11]	24 [7]	15 [10]	16 [3]
Age							
<25 (n=91)	17.04±6.7	6 [6]	19 [7]	30.77±9.03	25.51±5.78	15.16±6.5	16 [4]
≥25 (n=40)	14.2±6.5	4 [4]	18 [13]	27.55±8.72	22.72±5.28	15.02±6.72	16 [3.5]
p	0.026	0.022**	0.075**	0.060	0.010	0.911	0.860**
Educational status							
College (n=31)	15.94±7.22	6 [6]	18 [7]	30.1±8.41	25 [8]	13.32±6.92	15 [3]
High school grad.(n=91)	16.46±6.76	6 [6]	19 [8]	29.18±9.37	24 [7]	15.81±6.27	16 [4]
MSc or PhD (n=9)	14.11±4.86	9 [5]	21 [4]	34.89±5.97	26 [5]	14.33±7.47	17 [5]
p	0.396	0.478*	0.544*	0.190	0.791*	0.175	0.838*
Gender							
Female (n=114)	16.49±7.07	6 [6]	19 [7]	29.75±9.02	24.9±5.83	14.99±6.64	15 [4]
Male (n=17)	14.06±3.38	6 [7]	14 [9]	30±9.32	23±5.1	16±5.94	16 [4]
p	0.166	0.479**	0.046**	0.917	0.205	0.555	0.156**
Marital status							
Married (n=75)	15.96±6.27	5 [6]	19 [9]	29.51±8.86	24.49±5.1	15.69±6.22	15 [3]
Single (n=56)	16.46±7.39	7 [5]	18.5 [8.5]	30.16±9.3	24.87±6.57	14.36±6.94	16 [4.5]
p	0.674	0.096**	0.880**	0.683	0.709	0.249	0.264**
Working status							
Fixed shift (n=58)	15.41±6.72	5 [6]	19 [9]	31.33±9.44	24.93±6.06	15.52±6.88	16 [3]
Variable shift (n=73)	16.78±6.75	6 [6]	19 [8]	28.56±8.55	24.44±5.53	14.81±6.29	15 [4]
p	0.251	0.269**	0.258**	0.081	0.628	0.540	0.639**

*Descriptive statistics were shown as mean ±standard deviation and median [IQR]. *Nonparametric Kruskal Wallis test results. **Nonparametric Mann-Whitney-U test results.*

Table III: The correlations between ProQOL scores and RSES and MBI scores.

	ProQOL					
	Compassion Satisfaction		Burnout		Compassion Fatigue	
	r	p	r	p	r	p
RSES	0.098	0.264	0.044	0.617	0.150	0.088
MBI						
Emotional exhaustion	-0.217	**0.013**	0.468	**<0.001**	0.334	**<0.001**
Depersonalization	-0.071	0.421	0.280	**0.001**	0.300	**<0.001**
Personal accomplishment	0.365	**<0.001**	0.385	**<0.001**	0.190	0.030

r: Spearman's correation coefficient; p-values of the statistically significant correlation coefficients were shown as bold.

Table IV: Multiple linear regression models for ProQOL sub-scales.

Dependent variable	Independent variables	β coefficient	SE of β	95% CI of β		p
				Lower	Upper	
ProQOL - Compassion satisfaction	Constant	18.829	3.739	11.428	26.229	<0.001
	MBI Emotional exhaustion	-0.473	0.116	-0.701	-0.244	<0.001
	MBI Depersonalization	0.226	0.219	-0.207	0.660	0.304
	MBI Personal accomplishment	0.833	0.112	0.612	1.055	<0.001
	RBSO	0.138	0.174	-0.206	0.482	0.428
ProQOL – Burnout	Constant	12.699	2.400	7.950	17.448	<0.001
	MBI Emotional exhaustion	0.361	0.074	0.214	0.508	<0.001
	MBI Depersonalization	0.099	0.141	-0.179	0.377	0.483
	MBI Personal accomplishment	0.348	0.072	0.206	0.490	<0.001
	RBSO	-0.052	0.111	-0.272	0.169	0.644
ProQOL – Compassion Fatigue	Constant	3.193	3.095	-2.931	9.318	0.304
	MBI Emotional exhaustion	0.209	0.096	0.020	0.398	0.031
	MBI Depersonalization	0.329	0.181	-0.029	0.688	0.072
	MBI Personal accomplishment	0.171	0.093	-0.012	0.355	0.067
	RBSO	0.223	0.144	-0.061	0.508	0.123

The relationship between the subscales of ProQOL and MBI was determined using multiple linear regression model and ProQOL significantly affected CS subscale, MBI on the subscales of EE and PA, and ProQOL on burnout subscale ($p<0.001$). The EE subscale of MBI had effected on medium level ProQOL compassion fatigue subscale ($p<0.001$, Table IV).

DISCUSSION

In this study, nurses' EE (16.00) and depersonalization (6.00) median scores were found low, which was a good result in terms of burnout syndrome. Emotional exhaustion is the most significant determinant of burnout which measures a person's level of feeling her/his self-estranged to work and indifference to others. Depersonalization is the insensitive attitude and behaviour that a person shows towards the people she/he gives care as if they were objects. The fact PA scores (19.00) were high meant that nurses had problems in PA. In other studies, there were similar results supporting these. Personal accomplishment describes the feelings of success and sufficiency at work, tendency to evaluate oneself as insufficient when there is a decrease in the success, and due loss of motivation and occupational accomplishment. In other studies, there were similar results supporting this. The data by Sahin *et al*. and Ayraer *et al*. were parallel to this study.[9,10]

It was found that high occupational stress was related with an increase in EE and a decrease in PA. Nurses, who have a crucial role in healthcare services, face severe strain and get stressed due to factors like excess workload, the necessity to give the patients and their relatives the support they need, low wages, administrative difficulties, professional image and lack of self-esteem. Altay *et al*. and Sayil *et al*. found that DT and D averages were at medium level, which was contrary to the results of this study, while they found scale averages to be higher, which was parallel to our study.[11,12] As seen in these studies, DT and D subscale scores were satisfactory while the score from personal accomplishment showed that nurses in general had a moderate level of burnout. The results obtained so far support the results of other studies conducted on this topic. It was seen that the results obtained from the studies conducted in different regions and samples were similar to the results of other studies carried out in Türkiye.[10-15] The results obtained so far support the results of other studies conducted on this topic.[13]

CS, one of the subscales of ProQOL, expresses the feeling of pleasure and satisfaction because of the help one gives to another person in need of assistance in a field related to her/his profession or job was found in the medium level with an average score of 30.00. Burnout, which is a feeling of despair due to difficulties in coping with problems of work, had an average score of 24.00 at medium level. CF, which measured the symptoms when faced with a stressful event, was found out to be at a low level with an average score of 15.00. According to these results, healthcare staff has a medium level of life quality in general. The low level of compassion fatigue average scores shows that they do not need any help or support. In a study by Yildirim and Hacihasanoglu, which was carried out among the healthcare staff, it was also detected that they had a medium level of life quality.[6]

It was observed that MBI subscales EE, Depersonalization and PA had a significant correlation with age while they had no significant correlation with other socio-demographic data. The majority of the participants (69,5%) were below 25 years of age (Table II). The younger the age was, the higher the EE, D and PA sub-scores was, which is similar to the literature. The reason why burnout is seen less among the older people is that they respond in a more mature way to the events and they have less expectation. The conclusion that experience in advanced age affects one's outlook on life is stated in many studies.[5,16-19]

In other studies, it was detected that gender had a distinctive effect on burnout.[3,5,10] The average scores of nurses for PA varied according to age and gender was found to be high, as shown in Table II. In the comparative analyses, it was seen that they had significant correlation while their average scores were close to each other. Armutcu *et al*., Helvaci and Turhan and Kaya found similar results in their studies. They stated that advanced age and being female was a positive factor increasing the level of personal success.[2,19-21] The present study has similarity with these data (Table II).

While there was a significant correlation between MBI subscale EE and PA, quality of life subscale compassion satisfaction, EE, D, PA between quality of life subscale burnout and MBI subscale EE, D between quality of life subscale CF, no correlation was found with RSES and ProQOL. It was determined that personal accomplishment highly influenced the quality of life. It is frequently seen that psychiatric comorbidities affect the quality of life negatively. The facts that nurses have hard working conditions, they may experience burnout due to the feature of their job, and this would negatively affect their life quality put forward the necessity of improving current working conditions of nurses (Table III).[16,19]

The limitation of this study is that it was carried out among nurses at only one hospital, hence the results of this study cannot be generalised for all nurses who may experience different working conditions. The authors recommend that since this study included only one hospital, the study can be replicated using a larger sample size from multiple hospitals so that the reliability of the data may increase and the findings may become more generalised.

CONCLUSION

Burnout is considered as an occupational hazard exposure for those working face-to-face with people, as in education and health services. In this study, burnout among nurses affected compassion satisfaction and personal accomplishment in a negative way.

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2. *Is Self-Esteem Actually the Protective Factor of Nursing Burnout?*

Original Article

Is Self-Esteem Actually the Protective Factor of Nursing Burnout?

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Abstract

Background: Several studies have indicated the significance of personality in the development of burnout with certain personality traits, like self-esteem, to have the main modulating effect.
Objectives: The aim of this study was to examine the relationship between nurses' self-esteem and the interactive (or moderating) role of personal and professional factors on the burnout process.
Methodology: A cross-sectional survey was conducted. A total of 183 hospital nurses completed a self – reported questionnaire.
Results: The results indicated that respondents exhibited high scores in burnout and in the Self-Esteem Scale with female nurses to have higher scores. A positive correlation between self-esteem and all three dimensions of burnout was found. Professional identity was the strongest predictor of personal accomplishment, whilst the inter-professional collaboration was the strongest negative predictor in the model of emotional exhaustion.
Conclusions: Self-esteem might be a quality relevant to the nursing profession, still there are factors that work as a "driven force" that keep nurses' heading on. Multi-modal strategies that create and enhance structures needed for improving nurses' self-esteem should be incorporated in the nursing educational programs.

Keywords: self-esteem, burnout, nurse, professional identity, inter- intra-professional collaboration

Introduction

Nurses are among health professionals sharing the highest prevalence of burnout (Cañadas-De la Fuente et al., 2015). It's a profession with remarkable physical, psychological and emotional stress due to the sensitive working environment. Nurses should not experience burnout because it destroys creativity, reduces productivity and increases acts of poor judgment (Altun, 2002). Although, stressful aspects of the working environment are important predictors of burnout, quite a few studies have indicated the significance of personality in the development of burnout (Ang et al., 2016). Certain personality traits may act as a protective measure against burnout. For example, self-esteem may have a modulating effect on the occurrence of burnout (Gomez et al., 2014). Some nurses are more

resilient than others against occupational stressors. Resilience could be explained by nurses' professional values that may influence a person's behavior, both consciously and unconsciously, playing a pivotal role in the manifestation of burnout (Altun, 2002). The way nurses think and feel about themselves enhances retention rates (Horton et al., 2007).Professional identity as a part of self concept is considered critical for nurses to function at a high level and benefit from it (Johnson et al., 2012). Few studies have examined inter-professional collaboration as a possible job resource, which may reduce burnout in nurses (Rafferty et al., 2001). Therefore it is highlighted that there is need for further exploring how inter-professional collaboration could predict burnout. Taking under consideration the high rates of nursing burnout, additional research is needed in order to identify the contextual factors, which either contribute to or have a synergetic effect with self esteem on burnout in nurses.

Research questions and hypothesis

The aim of the present study was to examine the relationship between nurses' self-esteem and the interactive (or moderating) role of personal and professional factors on the burnout process. Hence, the study aimed at answering the following research questions:

1. Is there a significant relationship between self-esteem perception of Greek nurses and their burnout levels?
2. Does professional identity and inter-professional- intra-professional collaboration account for the prediction variance and burnout in Greek nurses?

Background

Burnout is defined as a prolonged psychological reaction to chronic emotional and interpersonal work stressors and is divided into three dimensions: emotional exhaustion (EE), depersonalization (DP), and reduced personal accomplishment (PA) (Maslach et al., 2001). The existence of burnout syndrome can have a negative effect on patient safety (Ehmariah et al., 2016) whilst accounts for nurses' poor physical health (Sorour and El-Maksoud, 2012), impaired memory (Peterson et al., 2008), job dissatisfaction (McHugh et al., 2011) and absenteeism (Lambert et al., 2015). In nursing, factors like role ambiguity (Lei et al., 2010), heavy workload (Epp, 2012), low staffing (Karanikola et al., 2012) and exposure to death and pain (Peters et al., 2012) operate as pivotal factors for burnout.

Professional identity refers to the characteristics that designate the role and function of a given profession (Seo and Kim, 2017) and is augmented by the "position within the society", "interactions with others" and the "interpretation of the experiences"(Sutherland et al., 2010). That includes attitudes, values, knowledge, beliefs and skills that are shared with others within the professional context (Crossley and Vivekananda-Schmidt, 2009). Nurses' professional identity is constructed through endurance of difficulties and evolves during their careers, whilst occupational choice is a core characteristic of identity as career choices may be in line with self-perception (Johnson et al., 2012). Inter-professional collaboration has been valued in providing high quality of care (Kowitlawakul et al., 2016) and it is necessary in the health care setting, since there is no single profession, which can meet all patients needs (Matziou et al., 2014). It increases active participation of health professionals in decision making, ensuring respect for team member contribution (Herbert, 2005). Team role clarity and team role identification may indicate lower burnout levels (Onyett, 1997). On the other hand, self-esteem can have a buffering effect on stress control and coping (Wu et al., 2011). Self-esteem is defined as a personality trait. It is an outcome of converging personal and professional values, a motivator to maintain commitment to identity standards, and a buffer of moral distress when value incongruence is experienced (Cast and Burke, 2002). People with high self-esteem evaluate themselves positively and are proud of their achievements, while those with low self-esteem are characterized by feelings of worthlessness and lack of confidence (Rosenberg 1985). In addition, low self-esteemed individuals are emotionally more vulnerable and have less interactions with others in their workplace (Khezerlou, 2017). The association between self-esteem and burnout symptoms is well documented (Fothergill et al., 2000) and is already known that professionals with low self-esteem are more susceptible to burnout (Brown and Roloff, 2011).

Methodology

A cross-sectional survey was conducted using a sample of nurses working in a general hospital in

Greece. Participants were recruited by paper poster displays in the nursing stations of all hospital departments. The inclusion criteria were nurses with at least one year of work experience and a permanent employment status. Interested nurses who met the inclusion criteria were informed about the study and provided informed consent. Of the 200 questionnaires that were distributed, 183 nurses completed the questionnaires (response rate of 91.5%).

Data was collected using a self- administered questionnaire that was divided into five main components. The first part included socio-demographic characteristics such as: age, gender, years of experience, hospital department. The second part included the Maslach Burnout Inventory (MBI) (Maslach &Jackson, 1996) which is a 22-item Likert -7 scale ranging from "never" to "every day". The scale measures three related dimensions of burnout, namely emotional exhaustion (EE), depersonalization (DP) and personal accomplishment (PA). Scores are considered to be high if they are in the upper third of the normative distribution, average if they are in the middle third and low if they are in the lower third (Maslach et al. 1996). The reliability of the questionnaire was adequate in terms of Cronbach's alpha (EE, DP, and PA for this sample were good (as α =.86 , .72 and .75, respectively). The third part included the Self-Esteem Scale (RSES) (Rosenberg 1965) which is a 10 items scale, formulated as statements (five positive and five negative) and is measured on a 4 Likert scale ranging from "strongly agree" to "strongly disagree". The reliability of the Greek version (Galanou et al., 2014) was α =.73. The forth part was a specially designed questionnaire based on national and international bibliographical evidence and piloted in a Greek sample. It comprised of an inter-professional collaboration (INPC) and an intra-professional collaboration (ITPC) index that aimed at exploring the nurses' relationships with their colleagues and doctors (Dimitriadou et al. 2008). The items were measured in a 4-point scale. The reliability of the all indexes for this sample was adequate (INPC, and ITPC for this sample were α =.78 and α =.73 respectively). The final part included the Professional Identity Index that explored how nurses think and feel about themselves in relation to their nursing profession. It comprised of 6 questions measured in a 4-Likert scale. Some of the questions are as follows: "Nursing is a profession that demands critical thinking", "Nurses do not need expertise since they only have to follow doctor's orders" and "Nursing care is crucial for patient's state of health". The reliability of the index was α =.67.

Data was collected from September 2016 until December of 2016. Approval from the scientific committee of the hospital was obtained. Participation was voluntary and participants were informed that confidentiality would be maintained, ascertaining the right to withdraw from the study at any time.

Demographic data was exported to the Statistical Package for the Social Sciences (SPSS), version 23 for data analysis. Mean scores were calculated for items measuring personality and professional traits. Spearman's rho correlation test was performed in order to examine the relationships among burnout, self-esteem, professional identity and inter- intra professional collaboration indexes. Variables showing a significant association were entered in a multiple regression model as predictors, with burnout as a dependent variable.

Results

Among 183 nurses surveyed, 15.8% were male nurses, 79.9 % had more than ten years of experience, and 73.4% were married. Additional demographic characteristics are presented in Table 1.

Occupational Burnout, self-esteem, professional identity, intra inter-professional collaboration scores

The MBI identified 25.6% of the respondents to have high EE (cut off score of ≥39), 25.1% having high DP (cut-off score of ≥17) and 27.3% having low PA (cut-off score of ≤42), according to the specified cut off points. Subscale score means of the three dimensions are presented in Table 2. The EE score was significantly correlated with gender $t(181)=2.58, p=.002$ and years of experience ($r=-.245, p=.001$). No other significant correlation was found between burnout subscale scores and demographic characteristics. Participants exhibited moderate score at the Self-esteem Scale (21.76 ± 4.1) whilst female nurses had higher scores (M=22.8, SD= 3.98) than males (M=21.2, SD=4.86), $t(181)=-.108, p=.05$. Intra/inter-professional collaboration scores were not statistically significantly differentiated by gender, education, working department or years of experience. However, inter-professional collaboration was

found to be correlated with the number of working weekends (r=.18, p=.013) and number of night shifts per month (r=.14, p= 0.46)(Table 3.). The Professional Identity Index was significantly correlated with education t(181)=-2.116,p=.036) and registered nurses had relatively higher score (M=21.6, SD=2.14) than nursing assistants (M=20.8, SD=2.19).

Correlation between self-esteem and burnout

Significant positive correlation was found between occupational burnout scores and the Self-Esteem Scale. Moreover, the PA scale was strongly correlated (r=.34, p=.000) with the Self-esteem Scale whilst the EE scale had a weakly negative correlation (r=-.15,p=.037). Nevertheless, when both three burnout scales were controlled at the same time, no significant correlation was detected. Results of Spearman's correlation were showed in Table. 3.

Correlations between self-esteem, professional identity and inter- intra professional collaboration

Strong positive association was identified between total Self-Esteem Score and Professional identity Index (r=.42,p=.000). Moderate associations were observed between total Self-Esteem score and the Inter- Intra-Professional Collaboration Indexes (r=.19,p=.01 and r=.21,p=.02 respectively) (Table.3)

Correlations between burnout, professional identity and inter- intra professional collaboration

All burnout scales had a significant negative correlation with the Inter- Intra Professional Collaboration Indexes. More specifically, EE score had a moderate negative association with the Inter-Professional Collaboration Index (r=-.22,p=.002) and the Intra- Professional Collaboration Index (r=-.30,p=.000). The PA scale was correlated with the Professional Identity Index (r=.31, p=.000) while no significant correlation wad detected between the EE scale and the Professional Identity Index (Table. 3).

Hierarchical regression analysis

Since burnout is considered as a combination of EE,D and lack of PA (as defined by Maslach), it was accepted that it would be difficult to combine these three dimensions in a single score (Maslach et al., 1996). For this reason separated statistical analyses were performed.

A four hierarchical multiple regression analysis was conducted with emotional exhaustion, depersonalization and personal accomplishment as the dependent variables. Self esteem was entered at stage one of the regression. The professional identity was entered at stage two, the inter-professional collaboration at stage three and the intra-professional collaboration at stage four.

Hierarchical regression analysis (continue)

Hierarchical multiple regression revealed that self esteem entered at Step 1 explained 26.8% , F(1,181)=4.526, p=.035 in emotional exhaustion. When professional identity was included at Step 2 , the total variance was 32.7%, F(2,180)=3.100,p=.047. In Step 3 inter-professional collaboration explained 35%, F(3,179)=5.182, p=.002 of the variance. Finally, when the intra-professional collaboration was added, the model as a whole accounted for 41%, F(4,178)=6.152, p=.000 of the variance in emotional exhaustion (Table 4.)

In the case of depersonalization self esteem entered at Step 1 explained 32%, F(1,181)=11.55,p=.001. In step 3 Inter-professional collaboration explained 35% F(3,179)=6.060, p=.001 of the variance. In the final step, the model accounted for 36% , F(4,178)=4.562, p=.002 of the variance in depersonalization (Table 5.)

To assess the contribution of a number of independent variables to the variance of personal accomplishment, a final hierarchical multiple regression was used. Self esteem was entered at step 1 and explained 34% F(1,181)=28.273, p=.000 of the variance. In step 2 when professional identity was entered 36%, of the personal accomplishment variance was explained F(2,180)=20.611, p=.000. In step 3. 41% of the variance was explained when the inter-professional collaboration was entered F(3,179)=15.860,p=.000. Finally, when all variables were included, the model explained 43% of the variance F(4,178)=13.410, p=.000 (Table 6.)

Table 1. Demographic data (n=183)

Items	Classification	Number of people	Percentage (%)
Departments	Internal medicine	125	72.7
	ICU	58	27.3
Gender	Female	154	84.2
	Male	29	15.8
Years of experience	Less than 10	46	25.1
	11-20	81	44.3
	21-30	56	30.6
Marital status	Married	136	74.3
	Unmarried	47	25.7
Education	Registered nurses	149	81.4
	Nursing assistants	34	18.6
Job title	Nurse	138	75.4
	Chief nurse	11	6
	Nurse assistant	34	18.6

Table 2. Subscale score ranges, means and SDs (*n*= 183)

Subscale	Range of subscale values	Mean ± SD
Emotional exhaustion	12-53	30.1421± 10.74
Depersonalization	3-30	12.13± 5.59
Personal achievement	15-48	36.74± 7.03

Table 3. Correlations, Means and Standard Deviations of Study Variables

Scale	M	SD	1	2	3	4	5	6	7
1. Self-esteem	21.76	4.1	–						
2. Professional identity	21.54	2.1	.425**	–					
3. Emotional Exhaustion	30.1	10.7	-.154*	0.32	–				
4. Depersonalization	12.1	5.5	-.206**	-.099	.236**	–			
5. Personal accomplishment	36.7	7	.343**	.319**	-.087	-.339**	–		
6.Inter professional collaboration	7.73	1.7	.216**	.022	-.308**	-.122	.215**	–	
7. Intra professional collaboration	8.84	1.8	.189*	.205*	-.225**	-.174*	.235**	.396**	–

**. Correlation is significant at the 0.01 level (2-tailed).

*. Correlation is significant at the 0.05 level (2-tailed).

Table 4. Regression coefficients for predictors of Emotional Exhaustion

	R	R^2	R^2 change	B	SE	β	t	p
Step 1	.156	.27						.000
Self esteem				.41	.19	-.150*	-2.128	.035
Step 2	.182	.033	.06*					.047
Self esteem				.52	-.210	-.168**	-2.271	.001
Professional identity				.51	.396	-.198*	1.288	.002
Step 3	.283	.35	.02*					.002
Self esteem				-.415	.209	-.158*	-1.989	.048
Professional identity				.661	.390	-.134*	1.694	.009
Inter professional collaboration				-1.274	.423	-.224*	-3.011	.003
Step 4	.349	.41	.06**					.000
Self esteem				-.289	.209	-.110	-1.380	.169
Professional identity				.431	.390	.088	1.105	.270
Inter professional collaboration				-.684	.462	-.120	-1.481	.140
Intra professional collaboration				-1.447	.499	-.235*	-2.902	.004

**. Correlation is significant at the 0.01 level (2-tailed).

*. Correlation is significant at the 0.05 level (2-tailed).

Table 5. Regression coefficients for predictors of Depersonalization

	R	R^2	R^2 change	B	SE	β	t	p
Step 1	.245	.32						.001
Self esteem				-.334	.098	-.245**	-3.399	.001
Step 2	.346	.33	.01*					.047
Self esteem				-.318	-.108	-.233*	-2.06-	0.04
Professional identity				-.0.73	.0.203	-.028	-.360	.719
Step 3	.304	.35	.02**					.001
Self esteem				-.273	.108	-.200*	-2.535	.012
Professional identity				-.008	.202	-.003	-.040	.0968
Inter professional collaboration				-.545	.219	-.184*	-2.493	.014
Step 4	.305	.36	.01*					.002
Self esteem				-.264	.111	-.194*	-2.391	.018
Professional identity				-.025	.206	-.010	-.119	.906
Inter professional collaboration				-.503	.244	-.170*	-2.059	.041
Intra professional collaboration				-.104	.264	-.0.32	-.394	.694

**. Correlation is significant at the 0.01 level (2-tailed). *. Correlation is significant at the 0.05 level (2-tailed).

Table 6. Regression coefficients for predictors of Personal Accomplishment

	R	R^2	R^2 change	B	SE	β	t	p
Step 1	.368	.34						.000
Self esteem				.631	.119	.368*	5.317	.001
Step 2	.432	.36	.02*					.047
Self esteem				.457	.126	.266*	-3.619	.000
Professional identity				.800	.238	.248**	3.367	.001
Step 3	.458	.41	.05**					.000
Self esteem				.409	.127	.238*	3.226	.002
Professional identity				.729	.237	.226*	3.079	.022
Inter professional collaboration				.595	.257	.160*	2.315	.014
Step 4	.305	.44	.03*					.002
Self esteem				.349	.128	.203*	2.724	.007
Professional identity				.837	.239	.259**	3.502	.001
Inter professional collaboration				.316	.283	.085	1.117	.2.65
Intra professional collaboration				.683	.306	.169*	2.235	.027

**. Correlation is significant at the 0.01 level (2-tailed). *. Correlation is significant at the 0.05 level (2-tailed).

Table 7. Previous studies in nurses in Greece

	Emotional Exhaustion Scale Mean ± SD	Personal Accomplishment Mean ± SD	Depersonalization Scale Mean ± SD
Adali (1999)	24.01±11.34	35.05±9.47	7.8±5.8
Dilintas (2010)	25.4±11.8	34.08±6.9	9.8±6.5
Noula et al. (2010)	25.97 ± 10.56	32.35 ± 8.15	10.01 ± 6.1
Skefales el al. (2014)	27.5±11.3	32.6±9.3	8±6.1

Discussion

The paper presents the contributions of self esteem, professional identity, inter- professional and intra-professional collaboration in a model predicting each one of the three burnout dimensions.

In our study higher mean levels of EE (M=30.14) and DP (M=12.13) scores were reported as compared to results from previous studies in nurses in Greece (Table 7.). Even though the understaffing in nursing personnel in Greek hospitals is not new (Dimitriadou et al. 2009), the economic recession in Greece has made the situation worse. There is an increase in the average age of nurses working in the public sector and that is a fact that is not going to change soon since there is not expected to be a nurse recruitment in the near future. Nevertheless, a really interesting fact is that the personal achievement subscale (M=36.74) in our study presented high score, even though nurses have to work harder and have to watch their salaries cut back. According to Maslach and

Goldberg (1998) low rewards diminish the value of work and the value of the worker, developing a feeling of injustice, thus having a negative effect on personal accomplishment. However, in our study, other factors may be responsible for nurses' unexpected high score in personal accomplishment scale, perhaps the strong perception of professional identity and the feeling of supporting patients who are economically weak and unemployed. Self-esteem is considered a major problem in the nursing profession. Nurses with healthy self-esteem have better performance in their work, whilst nurses with low self-esteem are not likely to do so (Randle, 2003b). In the present study moderate self-esteem score was observed. This can be explained by the low scores in inter/intra-professional indexes, supporting the important role that plays, in the way people are treated by other healthcare professionals, in the development of their self-esteem in the hospital context.

Nurses rework their professional identities in response to changes in their professional lives (Johnson et al., 2012). In our study, this probably explains the high scores in the Professional Index. Nurses "need" to believe that they are competent and offer high quality health services, because in the physician health centered system in Greece, the only thing that can help them carry on is the strong professional identity. A positive correlation between self-esteem and all three dimensions of burnout was found. In particular, emotional exhaustion and depersonalization were negatively correlated with self-esteem, while the personal accomplishment was positively related with it. In line with the transactional model of stress and coping (Lazarus and Folkman, 1984), if an individual does not believe that he is significant or worthy, stress may be expected to appear and negative feelings may trigger avoidance behaviors. Ineffective coping with stress further exacerbates the problem and makes burnout development possible. On the other hand, people with high self-esteem have a more positive attitude towards their role at work and may handle stressful events more effectively (Fothergill et al., 2000). Self-esteem affects the relationship between job satisfaction and is the link between work performance and work role conflicts (Papanis, 2004). Studies have reported that low esteemed individuals, displayed limited coping resources, thus increased psychological distress and difficulties in controlling stressful events (Lee et al., 2013).Emotional exhaustion is afflicted first, as it is often the earliest manifestation of burnout (Maslach et al., 2001).

The positive association between self esteem and professional identity in the present study, suggests people's ability to consider their work meaningful, judging their own worth in a way that has impact not only on their role status but on their personal control and performance as well. Professional identity was the strongest predictor of personal accomplishment. Professional identity is the individual nurse's perception of her/himself in the context of nursing practice. It is the sense of self that is derived from the role we take on in the working environment (Johnson et al., 2012). When nurses develop a deep valuing and commitment to themselves, self-esteem is enhanced, thus increase in competence and successful achievement occurs.

The inter-professional collaboration was the strongest negative predictor in the model of emotional exhaustion. Relations with doctors are an important factor that may yield benefits in terms of nurses' work engagement and clinical autonomy. Supportive and empowering relations with doctors lead nurses to positive attitudes towards their position (Gunnarsdottir et al., 2009).

Limitations

The cross sectional research design renders impossible the inferences of causal relationships among the variables concerned. Moreover, the present study relied on self report measures. Further studies that include objective measures and include larger randomized samples would be important. Caution is exerted in interpreting the quantitative associations that are presented in this study.

Conclusion

Nurses are particular vulnerable to burnout because of changeable interpersonal interactions and multidimensional organizational factors. Self-esteem might be a quality relevant to the nursing profession, still there are factors such as the professional identity that work as a "driven force" that keep nurses' heading on, despite the difficulties they encounter during their daily practice. The central problem for nurses working in the hospital environment is the dissonance between expectations cultivated during nursing studies and the reality experienced at work.

Education programs should incorporate the working process along with nursing studies and should focus on strategies that create and enhance structures needed for improving nurses' self-esteem and professional identity. This understanding can prepare nurses to become more resilient and fight back for better patient health conditions.

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3. Association of burnout syndrome and global self-esteem among Polish nurses. Archives of Medical Science

Association of burnout syndrome and global self-esteem among Polish nurses

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Abstract

Introduction: The development of burnout syndrome is conditioned by demographic variables, personality-related variables, ways of coping with difficulties and organizational/professional factors. Burnout is a psychological syndrome of emotional exhaustion and fatigue that may occur in people working with other people in certain ways. Understanding the role of global self-esteem and sociodemographic and work environment-related variables in the development of burnout syndrome in Polish nurses was the aim of this study.
Material and methods: The study included 1,806 nurses working in 23 hospitals in north-eastern Poland. The average age was 44.7 ±7.96 years. The questionnaire was of a proprietary design. The Copenhagen Burnout Inventory Scale and the Rosenberg SES scale were used.
Results: With regard to contact with patients, symptoms of burnout were present in 28.2% of respondents. Furthermore, 27% of respondents showed work-related burnout and personal burnout was indicated in 21% of them. Almost half of the respondents (46.6%) evaluated their self-esteem at an average level. The obtained results of the regression analysis indicated that global self-esteem was a predictor of professional burnout in nurses. Global self-esteem has important consequences in many aspects of the mental condition. It was found that global self-esteem is a key factor influencing personal burnout symptoms, and its modification may be used as a preventive measure.
Conclusions: Developing personal resources and deriving benefits from them may be important in the prevention of burnout syndrome. This study indicated the need to carry out preventive measures in the workplace to protect nurses from burnout.

Key words: nurses, occupational health, nursing, burnout syndrome, work environment, workforce issues, global self-esteem.

Introduction

The literature review confirms that the most commonly presented definition is the concept of burnout by Christina Maslach. According to this definition, "burnout is a psychological syndrome of emotional exhaustion, depersonalization and a reduced sense of personal accomplishment that can occur in people who work with other people in a certain way" [1]. An interesting approach to the problem of burnout has

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been presented by Danish researchers, acknowledging that exhaustion and fatigue is the basis of burnout. On this basis, Kristensen *et al.* developed a research tool called the Copenhagen Burnout Inventory (CBI) to measure burnout [2]. The CBI is a questionnaire available in the public domain that encompasses three sub-dimensions. Individuals may be compared and evaluated regardless of the occupational status using the personal burnout scale. The latter is meant to describe how tired or exhausted a person is. In the CBI inventory, this quality could be named fatigue, weakness, exhaustion or any other comparable term, and the person's burnout dimension is characterized as "the degree of physical and psychological fatigue and exhaustion that is experienced by the person" [2, 3]. Client-related burnout is "the degree of physical and psychological fatigue and exhaustion that is perceived by the person as related to his/her work with clients" [2, 3]. The quoted authors analyzed how people perceive a relation between their exhaustion and their "people work". Finally, work-related burnout is defined as "the degree of physical and psychological fatigue and exhaustion that is perceived by the person as related to their work" [2, 3]. A new approach to work-related burnout distinguishes three characteristic symptoms: exhaustion, detachment and ineffectiveness at work [4]. Exhaustion means a reduction in cognitive and emotional resources as well as low energy levels and a decline in physical strength. Further, lack of involvement at work may manifest itself in detachment from providing a professional function [4]. Professions such as a nurse or a midwife are associated with a high risk of work-related burnout. Practicing these professions is associated with exposure to ergonomic, psycho-social and work organization related factors, which may have a negative impact on health. Work-related burnout among nurses and midwives as a psychological phenomenon has been studied and evaluated for many years. However, under dynamic changes in the work environment on a global scale, a contemporary nurse or midwife has to face an increasing number of threats resulting in an array of difficult circumstances often beyond human physical and psychological capacity. A review of the available literature clearly demonstrates the diversity of the problem of burnout. A cross-sectional survey of 598 Norwegian midwives showed that a personal or work-related burnout was reported by approximately 20% of them. Less than 5% of them reported a client-related burnout [5]. Also, in studies conducted at four German hospitals it was found that the workload was the strongest predictor of emotional exhaustion. Attention was also paid to the negative relationship between freedom of professional decision-making and emotional exhaustion [6]. In Shanghai, a study conducted on a group of 527 nurses showed high levels of emotional exhaustion. In 74–76% of nurses, the Demand/Control ratio was higher than 1, and in 13–27% of nurses the Effort/Reward ratio was higher than 1. High levels of burnout strongly associated with work-related stress were described in nurses from Shanghai [7]. Studies conducted by Shamali *et al.* confirmed that in nurses with fixed shift schedules, the emotional exhaustion was significantly higher than in nurses with random shifts, but no significant difference was found between personal accomplishment and depersonalization, or between nurses with fixed morning and fixed night shifts [8]. In other studies, researchers attempted to determine the burnout level in midwives employed in a maternity ward in South East Queensland, Australia. It this study, almost 30% of the examined midwives showed moderate-to-high levels of burnout, about half the study group scored moderate-to-high for personal burnout and another half scored high for work-related burnout [9]. The study results confirm the significance of work environment-related, sociodemographic and personal variables in the occurrence (and exacerbation) of work-related burnout syndrome. In studies conducted in Andalusia, a group of 676 nurses was studied and manifested average-to-high burnout levels. "There were statistically significant differences in burnout levels associated with the following variables: age, gender, marital status, having children, the level of healthcare, the type of work shift, healthcare service areas and conducting administrative tasks. Burnout was also associated with personality-related variables" [10]. The results of the available studies show that people with high self-esteem believe that they have high social skills and can easily establish new relationships. This may translate into better adaptation to new situations in the work environment and a greater ability to cope with difficulties [11]. It may be assumed that a high level of self-esteem in nurses favors the assessment of the work environment as a friendlier, safer and less stressful environment. Moreover, it could be a factor in decreasing the severity of (protection from) the negative effects of fatigue and tiredness at work in the form of professional burnout syndrome. Based on the above-mentioned studies, the risk of development of work-related burnout in the contemporary complicated work environment generates high psychological labor costs. The literature review showed a paucity of data from Poland on the relationship and role of global self-esteem with the occurrence of burnout syndrome among nurses. The activities related to ensuring a safe working environment encourage researchers to assess the role of the personal re-

sources of health care workers in the process of professional burnout, among which global self-esteem may play a significant role.

The aim of the study was to investigate the role of global self-esteem and sociodemographic and work environment-related variables in the development of burnout syndrome among Polish nurses.

Material and methods

Design

For the measurement of the variables, a questionnaire of our own design, containing questions about demographics and the work environment was used. The study exploited the Copenhagen Burnout Inventory (CBI) by Tage S. Kristensen *et al.*, which consists of 19 statements about attitudes toward work and feelings associated with it [2]. The CBI encompasses three scales for personal burnout (6 questions), work-related burnout (7 questions), and client-related burnout (6 questions) for use in different domains. All three scales assured a high level of internal reliability, with small non-response rates. The scales enabled a good differentiation between occupational groups in the human services, showing an expected pattern regarding correlations with other measures of fatigue and psychological well-being. In addition, the above scales had a good prediction value for sickness leaves, sleep problems, need for painkillers and intention to quit a job. A follow-up study showed that the burnout levels changed in a significant number of those surveyed. The CBI questionnaire psychometric properties were satisfactory, and Cronbach's α relating to the specific dimensions of each burnout was very high, ranging from 0.85 to 0.87. The respondents gave answers on a 5-point scale. A range of score responses ranged from 0 to 100 points, where 100 = all/to a very large extent, 75 = often/largely, 50 = sometimes/a bit, 25 = rarely/small degree, 0 = never/almost never/to a very small extent [2]. The average ratings for each component criteria for burnout were calculated: average ≤ 45 – no burnout, 46 < average ≤ 55 – risk of burnout, average > 55 – the presence of burnout [12]. Measurement of the global level of overt self-esteem, treated as a relatively stable attitude towards "Me", was done using Morris Rosenberg's Self-Esteem Scale (SES) in the Polish adaptation by Dzwonkowska *et al.* [13]. The scale consists of 10 propositions, all of them being diagnostic, and the person tested indicates how much he/she agrees with each of them. Answers are scored on a 4-point scale (ranging from 1 = strongly disagree to 4 = strongly agree). The result is a sum of points; the higher the points, the higher the level of self-esteem. Possible results fall within the range of 10 to 40 points. The general indicator of the global self-esteem level was transformed into standardized units, which were interpreted according to the characteristics of the sten scale. The sten scale contains 10 units and each unit equals 1 sten. Results from 1 to 4 stens were considered as low, ranging from 5 to 6 stens as average, and between 7 and 10 stens were considered high. The adapted Polish SES scale showed good psychometric properties with Cronbach's α in the different study groups varying from 0.81 to 0.83 [13].

Data collection

The study was conducted with voluntary, random sampling. Empirical material was collected from June 2013 to January 2015. The study was conducted at the workplace of nurses, with the consent of hospital directors. Thanks to the institutional nature of hospitals, the selection of the samples was random. A questionnaire campaign was conducted in 23 health-care facilities in north-eastern Poland: (7) Olsztyn, (2) Elbląg, (2) Ełk, (1) Działdowo, (1) Nowe Miasto Lubawskie, (1) Kętrzyn, (1) Szczytno, (1) Biskupiec, (1) Iława, (1) Ameryka, (1) Ostróda, (1) Pisz, (1) Mrągowo, (1) Nidzica, (1) Giżycko. In total, 2,885 questionnaire forms were distributed among medical personnel (nurses/midwives). Upon collection of data and elimination of faulty questionnaires filled in by nurses, 1,806 (62.6%) questionnaires were qualified for further analyses. The return percentage varied depending on the health-care facility and ranged from 25.3% to 87.5%.

The main criteria for inclusion in the study were at least 1 year of full-time employment as a nurse based on an employment contract and informed consent to participate in the study. Respondents were informed about the purpose of the survey, and had the opportunity to ask questions and receive explanations. Questionnaires were filled in anonymously and the collected empirical data were coded into a computer program. The results of the study were presented collectively.

Ethical approval

The study was conducted in line with the principles stated in the Declaration of Helsinki. Senate Research Ethics Committee of J. Rusiecki Olsztyn University College, Poland issued a positive opinion (No. 11/2016) on the ethical aspects of the research project. The Faculty of Health Sciences, Collegium Medicum University of Warmia and Mazury in Olsztyn covered the costs of publishing. The research was implemented as part of the project (62-610-001).

Statistical analysis

The statistical analysis employed descriptive statistic and sten scale scores. In order to evaluate

the dependence of the variables, the chi-square (χ^2) test of independence was used. For variables not showing a normal distribution, non-parametric tests were used in the analyses. To detect the impact of socio-demographic and work environment variables related to burnout, the Kruskal-Wallis (H) test was used. The correlations between variables were analyzed using Spearman's rank correlation test (r). The results were presented based on the classification of Guilford's correlation force. A multiple regression analysis was used to construct a random variable estimation model. The p-level < 0.05 was considered significant. Statistical calculations were performed using the Statistica 13 PL package (StatSoft).

Results

Characteristics of the studied group

The study involved 1,806 nurses. The average age was 44.7 ±7.96 years with a median of 45.0. Respondents were mostly aged 41–50 (n = 862; 47.7%), resided in a city (n = 1,432; 79.3%), were married (n = 1,414; 78.3%), regarded their financial situation as sufficient (n = 774; 42.8%) and had 2 children (n = 833; 46.1%). Every third person had a secondary medical education (n = 665; 36.8%), a group slightly smaller had college/post-secondary education (n = 371; 20.5%) and 25.4% (n = 458) had completed university studies (a bachelor's degree in nursing). The average number of years of work as a nurse was 22.5 ±9.45 years with a median of 24. The most numerous group consisted of persons working in the profession for 21 to 30 years (n = 734; 40.7%). More than three-quarters of respondents worked in shifts, including 'on call' time at night (n = 1,367; 75.7%), mostly as a regular nurse (n = 1,613; 89.3%).

Most of the respondents (n = 804; 44.5%) worked in wards/clinics with a medical profile, and fewer (n = 574; 31.8%) in wards with a surgical profile. 13.6% (n = 245) of the respondents worked in intensive care, anesthesiology and surgery units.

Characteristics of burnout and self-esteem

For individual components of burnout, average values were calculated: for the work-related burnout component 46.13 ±15.37, burnout in contacts with patients 45.80 ±18.25 and personal burnout 43.62 ±15.88. As shown in statistical analyses, half of the respondents demonstrated no personal burnout (50.7%; n = 915), 46.1% (n = 832) reported that they did not feel the symptoms of work-related burnout and slightly fewer reported lack of burnout in contacts with patients (44.7%; n = 807). More than a quarter of respondents claimed that they were in danger of burnout in all areas, and showed the following values: 28.2% for personal burnout and 27.0% for work-related burnout and burnout in contact with patients. The presence of symptoms of personal burnout was indicated by 21.1% (n = 381) of respondents, while far more nurses reported symptoms of work-related burnout (27.0%; n = 487) and burnout in contact with patients (28.3%; n = 512). The average rate of global self-esteem in the studied group was 27.3 ±10.06 with a median of 30.0 and was comparable to the results obtained during normalization testing in adults (30.11 ±4.08) [13]. In the current study, 46.6% (n = 841) of nurses rated their global level of self-esteem as average, and every fifth person indicated a high or low self-esteem globally (24.0%; n = 433 vs. 29.5%; n = 532). The obtained values of coefficients of the chi-square independence test indicate the presence of statistically significant relationships at the p < 0.001 level of significance for global self-esteem (independent variable) and professional burnout (dependent variable) in all three components: personal burnout, burnout at work and burnout in contacts with patients (Table I). Based on the value of r for Spearman's rank correlation test, a statistically significant negative correlation between the examined variables was found. The strength of the correlation between global self-esteem and personal burnout was weak, but it was highly significant (r = –0.26; p < 0.001). In the other two cases, a very weak relationship was observed (for

Table I. Significance of relations of global self-esteem and burnout

Burnout type	Chi-square test of independence (χ^2)	Kruskal-Wallis test (H)	Spearman's rank correlation (r)
		P-value	
Personal burnout	145.3 0.001	69.00 0.001	–0.26 0.001
Work-related burnout	81.3 0.001	38.74 0.001	–0.18 0.001
Burnout in contacts with patients	70.6 0.001	38.56 0.001	–0.16 0.001

Statistically significant: p < 0.001.

burnout associated with work $r = -0.18$; $p < 0.001$ and in contacts with patients $r = -0.16$; $p < 0.001$) (Table I). It may be concluded that nurses with lower global self-esteem often experience symptoms of burnout. It is worth noting, however, that they often observe symptoms of personal burnout rather than burnout associated with work and in contacts with patients (Table I).

Significance of the relationship between components of burnout, demographic and work-related factors

In subsequent analyses using the χ^2 independence test, the relationship between sociodemographic and work environment variables and the three components of occupational burnout were examined. The pool of analyzed independent variables included age, marital status, financial situation, education, number of years of work in the profession, system of work, type of position occupied and profile of activity of the ward/clinic. Only in the case of one variable determining the marital status of respondents was there no statistically significant relationship with personal burnout, work-related burnout or burnout in relations with patients. On the other hand, as a result of the analysis, statistically significant interrelations between the financial situation ($\chi^2 = 83.11$; $p < 0.001$), education of the respondents ($\chi^2 = 19.05$; $p < 0.02$), type of position ($\chi^2 = 13.61$; $p < 0.001$), branch activity profile/clinics ($\chi^2 = 14.17$; $p < 0.03$) and personal burnout characterized by prolonged physical and mental fatigue and exhaustion were observed (Table II). Slightly more associations were observed between independent variables and a component of occupational burnout associated with work characterized by prolonged physical and mental fatigue and exhaustion in connection with work performed. During the analysis of the values of χ^2 independence test coefficients, statistically significant relations were found between the nurse's age ($\chi^2 = 33.87$; $p < 0.001$), financial situation ($\chi^2 = 79.08$; $p < 0.001$), education ($\chi^2 = 41.41$; $p < 0.001$), number of years in the profession ($\chi^2 = 54.73$; $p < 0.001$), type of position occupied ($\chi^2 = 10.32$; $p < 0.005$), ward/clinic activity profile ($\chi^2 = 17.04$; $p < 0.009$) and occupational burnout (Table II). The analysis also revealed significant relationships between independent variables and the third area of occupational burnout manifested by physical and mental fatigue or exhaustion experienced by the nurse in contact with patients. The following values were recorded: for age ($\chi^2 = 16.94$; $p < 0.009$), financial situation ($\chi^2 = 78.41$; $p < 0.001$), education ($\chi^2 = 22.28$; $p < 0.004$), seniority ($\chi^2 = 36.71$; $p < 0.001$), work system ($\chi^2 = 6.41$; $p < 0.04$) and work-station category ($\chi^2 = 9.26$; $p < 0.009$) (Table II). In the next step of the statistical analysis, the Kruskal-Wallis test was used to study the differences between variables. No statistically significant difference was found between the work system and personal burnout, the profile of the ward/clinic activity and burnout related to work and burnout in the contacts with patients and the marital status of the subjects and burnout in relations with patients. For all other variables, statistically significant differences were found at the significance level of $p < 0.05$ (Table II). Interrelationships determining the direction and strength of the relationship between selected variables were evaluated using the Spearman rank correlation test. The process of presenting the results was based on the classification of Guilford's correlation force. A weakly negative, yet statistically significant relationship was found by submitting the results of Spearman's rank correlation test between the financial situation of the studied group and occupational burnout observed in all three components of burnout: personal ($r = -0.20$; $p < 0.001$), related to work ($r = -0.19$; $p < 0.001$) and in relationships with patients ($r = -0.19$; $p < 0.001$). This indicated that nurses who more often experience burnout syndrome more often have a worse financial situation. The results of the analyses showed that the remaining observed relationships between the variables showed a weak, statistically significant correlation. Detailed data are presented in Table II.

Burnout predictors

In the next step of statistical analyses, the multiple regression method was used to search for predictors for three components of occupational burnout (dependent variables – explained). The first type of analysis determined whether global self-esteem is a predictor of occupational burnout. The second analysis identified those sociodemographic variables and variables related to the work environment that allow the occurrence of burnout syndrome to be predicted. The pool of analyzed independent variables (explanatory variables) included global self-esteem, age, marital status, financial situation, education, years of work experience, work system, workplace and ward/clinic profile. The obtained results of the regression analysis showed that global self-esteem was a predictor of professional burnout of nurses in all three areas. In the case of personal burnout, it explained 7% of the variance of the dependent variable, while in the case of burnout at work it explained only 2% and also 2% for burnout in contacts with patients. Taking into account particular sociodemographic variables and those related to the work environment, regression analyses showed that the predictors of professional burnout of nurses were two variables: financial situa-

Table II. Significance of the relationship between components of burnout and demographic and work-related factors

Variables		*N* = 1,806 (%)	Test values		
			χ^2 test of independence (χ^2)	Kruskal-Wallis test (*H*)	Spearman's rank correlation (*r*)
			P-value		
Significance of relationship between personal burnout and demographic and work-related factors:					
Age	≤ 30	121 (6.7)	12.25 0.06	10.11 0.02	0.04 0.07
	31–40	394 (21.8)			
	41–50	862 (47.7)			
	≥ 51	429 (23.8)			
Marital status	Unmarried	168 (9.3)	8.21 0.22	3.24 0.35	0.03 0.11
	Married	1414 (78.3)			
	Widowed	38 (2.1)			
	Divorced	186 (10.3)			
Financial situation	Very good	48 (2.7)	83.11 0.001	78.26 0.001	–0.20 0.001
	Good	567 (31.4)			
	Sufficient	774 (42.8)			
	Poor	336 (18.6)			
	Very poor	81 (4.5)			
Education	Secondary medical	665 (36.8)	19.05 0.02	16.69 0.002	–0.07 0.001
	College/post-secondary	371 (20.5)			
	Higher – bachelor of nursing	458 (25.4)			
	Higher – master of nursing	214 (11.9)			
	Other higher, applicable in healthcare units	98 (5.4)			
Years of experience in the profession	≤ 10	248 (13.7)	10.87 0.09	9.039 0.03	0.04 0.04
	11–20	450 (24.9)			
	21–30	734 (40.7)			
	≥ 31	374 (20.7)			
Shift system	Single shift	439 (24.3)	1.61 0.44	1.40 0.23	0.02 0.23
	Multiple shifts (including work at night)	1367 (75.7)			
Type of position	Managerial	193 (10.7)	13.61 0.001	13.58 0.001	0.08 0.001
	Regular	1613(89.3)			
Ward/ clinic profile	Preventive clinic	804 (44.5)	14.17 0.03	8.18 0.05	–0.06 0.008
	Treatment clinic	574 (31.8)			
	Intensive care, anesthesiology, operating theater	245 (13.6)			
	Outpatient care, diagnostic department	183 (10.1)			
Significance of relationship between work-related burnout and demographic and work-related factors:					
Age	≤ 30	121 (6.7)	33.87 0.001	31.05 0.001	0.10 0.001
	31–40	394 (21.8)			
	41–50	862 (47.7)			
	≥ 51	429 (23.8)			

Table II. Cont.

Variables		N = 1,806 (%)	Test values		
			χ^2 test of independence (χ^2)	Kruskal-Wallis test (H)	Spearman's rank correlation (r)
			P-value		
Marital status	Unmarried	168 (9.3)	12.66 0.07	10.87 0.02	0.06 0.002
	Married	1414 (78.3)			
	Widowed	38 (2.1)			
	Divorced	186 (10.3)			
Financial situation	Very good	48 (2.7)	79.08 0.001	70.65 0.001	–0.19 0.001
	Good	567 (31.4)			
	Sufficient	774 (42.8)			
	Poor	336 (18.6)			
	Very poor	81 (4.5)			
Education	Secondary medical	665 (36.8)	41.41 0.001	36.69 0.001	–0.12 0.001
	College/post-secondary	371 (20.5)			
	Higher – bachelor of nursing	458 (25.4)			
	Higher – master of nursing	214 (11.9)			
	Other higher, applicable in healthcare units	98 (5.4)			
Years of experience in the profession	≤ 10	248 (13.7)	54.73 0.001	48.07 0.001	0.13 0.001
	11–20	450 (24.9)			
	21–30	734 (40.7)			
	≥ 31	374 (20.7)			
Shift system	Single shift	439 (24.3)	5.40 0.06	5.39 0.02	0.05 0.02
	Multiple shifts (including work at night)	1,367 (75.7)			
Type of position	Managerial	193 (10.7)	10.32 0.005	10.28 0.001	0.07 0.001
	Regular	1,613 (89.3)			
Ward/ clinic profile	Preventive clinic	804 (44.5)	17.04 0.009	5.97 0.11	–0.005 0.02
	Treatment clinic	574 (31.8)			
	Intensive care, anesthesiology, operating theater	245 (13.6)			
	Outpatient care, diagnostic department	183 (10.1)			
Significance of relationship between burnout in contacts with patients and demographic and work-related factors:					
Age	≤ 30	121 (6.7)	16.94 0.009	14.81 0.002	0.04 0.05
	31–40	394 (21.8)			
	41–50	862 (47.7)			
	≥ 51	429 (23.8)			
Marital status	Unmarried	168 (9.3)	4.68 0.58	3.20 0.36	0.03 0.20
	Married	1414 (78.3)			
	Widowed	38 (2.1)			
	Divorced	186 (10.3)			

Table II. Cont.

Variables		*N* = 1,806 (%)	Test values		
			χ^2 test of independence (χ^2)	Kruskal-Wallis test (*H*)	Spearman's rank correlation (*r*)
			P-value		
Financial situation	Very good	48 (2.7)	78.41 0.001	71.42 0.001	–0.19 0.001
	Good	567 (31.4)			
	Sufficient	774 (42.8)			
	Poor	336 (18.6)			
	Very poor	81 (4.5)			
Education	Secondary medical	665 (36.8)	22.28 0.004	28.16 0.001	–0.09 0.001
	College/post-secondary	371 (20.5)			
	Higher – bachelor of nursing	458 (25.4)			
	Higher – master of nursing	214 (11.9)			
	Other higher, applicable in healthcare units	98 (5.4)			
Years of experience in the profession	≤ 10	248 (13.7)	36.71 0.001	29.32 0.001	0.0081 0.003
	11–20	450 (24.9)			
	21–30	734 (40.7)			
	≥ 31	374 (20.7)			
Shift system	Single shift	439 (24.3)	6.41 0.04	6.11 0.02	0.05 0.01
	Multiple shifts (including work at night)	1,367 (75.7)			
Type of position	Managerial	193 (10.7)	9.26 0.009	8.53 0.003	0.07 0.003
	Regular	1,613 (89.3)			
Ward/ clinic profile	Preventive clinic	804 (44.5)	9.54 0.14	6.49 0.09	–0.04 0.04
	Treatment clinic	574 (31.8)			
	Intensive care, anesthesiology, operating theater	245 (13.6)			
	Outpatient care, diagnostic department	183 (10.1)			

Statistically significant: $p < 0.05$, $p < 0.01$, $p < 0.001$.

tion and work experience. It is worth noting that both variables have very low predictive power. The financial situation is a predictor of personal burnout, explaining 3% of the variance of the dependent variable, burnout at work: 4%, and burnout in relations with patients: 4%. The predictive role for burnout at work is occupational experience, which explained 2% of the variance of the dependent variable. A comparison of relevant predictors of occupational burnout is presented in Table III.

Discussion

Burnout syndrome is included in the International Statistical Classification of Diseases and Related Health Problems (International Statistical Classification of Diseases and Related Health Problems-ICD-10), but many researchers are still inconsistent in defining this phenomenon and diagnosing axial symptoms, including measurement methods [12, 14, 15]. Kristensen *et al.* demonstrated that professionally active nurses who indicated work-related burnout and burnout in contact with patients had a much lower overall severity [2, 12]. The results of the available studies indicate that there are many factors that are associated directly or indirectly with burnout. In the current study, almost half (47%) of the nurses showed a global sense of self-esteem on an average level, but 23% of respondents obtained low scores. In the authors' own research, when analyzing the predictive role of global self-esteem for the consequences of the burnout syndrome experienced, it was found that global self-esteem plays a key role, especially in preventing the symptoms

Table III. Summary of regression – burnout predictors

Variables	R^2	Beta	B	Error β	*t*	*P*-value
Predictors of personal burnout:						
Global self-esteem	0.07	–0.24	–0.26	0.02	–10.64	0.0001
Financial situation	0.03	–0.16	–0.15	0.02	–7.27	0.0001
Constant value			2.40	0.16	14.72	0.0001
$R = 0.33$; $R^2 = 0.10$; corrected $R^2 = 0.11$						
Predictors of work related burnout:						
Financial situation	0.04	–0.17	–0.16	0.02	–7.33	0.0001
Global self-esteem	0.02	–0.15	–0.17	0.03	–6.58	0.0001
Work experience	0.02	0.14	0.12	0.02	6.17	0.0001
Constant value			2.39	0.10	23.70	0.0001
$R = 0.28$; $R^2 = 0.08$; corrected $R^2 = 0.09$						
Predictors of burnout in contact with patients:						
Financial situation	0.04	–0.16	–0.15	0.02	–6.99	0.0001
Global self-esteem	0.02	–0.13	–0.15	0.03	–5.55	0.0001
Constant value			2.24	0.14	15.52	0.0001
$R = 0.25$; $R^2 = 0.06$; corrected $R^2 = 0.07$						

Statistically significant: $p < 0.001$. R – correlation coefficient, R^2 – multiple determination coefficient, Beta – standardized regression coefficient, B – non-standardized regression coefficient, Error B – error of non-standardized regression coefficient, t – t-test value.

of personal burnout. This suggests that developing personal resources and deriving benefits from them can be important in the prevention of burnout syndrome. However, the issue is not entirely clear and requires further scientific research, such as the estimation of hidden self-esteem, shown spontaneously, automatically and without self-reflection. The results of research conducted among 212 nurses in Germany using Rosenberg's Self-Esteem Scale indicated that nurses who had an academic degree displayed a statistically significantly higher level of self-esteem than nurses without an academic education. The type of professional training may therefore have a direct effect on self-esteem, thus offering a myriad of potential benefits to both nurses and patients [16]. Other studies have shown that the low self-esteem of nurses induces a service sabotage attitude, and that these nurses are less developed, both emotionally and chronologically, demonstrate less experience and have less education compared to their typical counterparts [17]. Recognizing the great importance of global self-esteem in the prevention of work-related burnout among nurses, it appears that strengthening self-esteem through micro-interventions, such as training or individual sessions targeted at the development of self-esteem resources, should be recommended. Based on study results provided by Hildingsson *et al.*, the strongest associations between burnout and midwives' characteristics were age < 40, work and work experience < 10 years [18]. Some researchers have indicated that the level of burnout increases with age [19, 20]. Others, however, do not support this thesis [6]. Similar results were obtained in the present study. There was a small positive, significant relationship between the age of nurses and personal burnout. Hildingsson *et al.* found that conflict with co-workers and/or managers, as well as worries about the future and one's health were other relevant explanatory variables. Those authors also found that one in three midwives had considered leaving the profession [18]. Moreover, Szpakowski *et al.* noted the very important problem of migration of young nurses and physicians from Poland, which should be a key element in the personnel policy in the Polish health-care system [21]. Work-related burnout may also aggravate the personnel situation in the nursing sub-system.

Several studies have clearly shown that the income of nurses is closely linked to burnout. Tekindal *et al.* emphasized the negative relationship of the financial situation of nurses with a sense of emotional exhaustion [22]. Furthermore, excessive workload had a negative correlation with a sense of personal achievement. The most important findings in the study of Demir *et al.* were

that higher education level, work experience and social status reduce burnout, and that working night shifts increases it [21]. The current research has shown that the appearance of burnout symptoms in the context of work is influenced by the following factors: financial situation, work experience, education, age, marital status, the shift system and the type of position held. Several studies by other authors have indicated a positive relationship between work experience and burnout [2, 22, 23]. In a study conducted by Hoffman and Scott it was found that irregular working hours and, above all, the 12-hour shift system, had a negative impact on health and the level of job satisfaction. Salary, autonomy and professional status were shown to determine career satisfaction in all studies [24]. It is worth noting another Polish study which showed that the main factor moderating the burnout syndrome of oncology nurses was their level of education, which also impacted their level of empathy [25]. Sadovich found that a high level of job satisfaction and positive reception of the factors affecting the process of working reduce the occurrence of professional burnout syndrome [26]. In the current study, nurses in managerial positions tend to do better in the work environment and show fewer symptoms of burnout, compared to nurses employed in other positions working in the nursing subsystem. Similar conclusions were drawn in Danish studies [27]. Of key importance in providing comprehensive patient care were interpersonal social skills and the atmosphere in the workplace. In the current study, it was demonstrated that around 44% of nurses felt that they were free from symptoms of burnout in contact with patients. Noteworthy findings of other authors were that nurses who are more burdened with work and more emotionally exhausted report having more problems in contacts with patients, more frequent conflicts in the therapeutic team, lack of faith in their competence and conflicts between work and private life [28]. A study conducted in South Africa of a group of 818 nurses showed that not only the experience of depletion of emotional resources but also feelings of depersonalization were related to stress due to job requirements and a lack of official support, a focus on venting emotions as a coping strategy and a weak sense of coherence. A strong sense of coherence and active-coping strategies predicted good work engagement [29]. As shown in the "Social Diagnosis", among 39 comparable professional groups, nurses in Poland are currently 16th in terms of overall quality of life [1]. De Oliveira *et al.*, based on their literature review, found that the following interventions were most frequently applied in the prevention of work-related burnout: yoga, cognitive coping strategies, compassion fatigue program, systematic clinical supervision, meditation, a web-based stress management program and a mental and psychological empowerment program [30].

The results of the study confirm the need to implement prophylactic burnout programs, including practical training, which allow individual psychological resource development, including global self-esteem. Based on the current research, it can be concluded that occupational hazard prevention programs for nurses should be permanently integrated into incentive systems that are an integral part of an efficient and effective nursing management approach. The interventions presented by de Oliveira *et al.* may also be included in prophylactic programs [30].

This study has its strengths as well as limitations. This is the first Polish study analyzing the issue of global self-esteem as a personal resource conducted on a very large group of 1,806 nurses from 23 hospitals. Self-evaluation techniques were used to evaluate the described variables. The studies were of a cross-sectional nature, so the presence of causal relationships between the variables should be considered with care.

In conclusion, about a quarter of the respondents indicated the presence of burnout symptoms. Polish nurses are more likely to experience personal burnout than work-related burnout and burnout in contacts with patients. The results of global self-esteem showed differentiation in the study group. The vast majority of nurses have average or high levels of global self-esteem. Global self-esteem has been shown to play an important role in predicting burnout and it explains 7% of the variance of the dependent variable. Demographic and work environment-related variables exerted various effects on the occurrence of professional burnout symptoms and the predominant factor was the financial situation of the respondents. Developing personal resources and deriving benefits from them may be important in the prevention of burnout syndrome. It is justified to carry out preventive measures in the workplace to protect nurses from burnout.

Conflict of interest

The authors declare no conflict of interest.

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4. Burnout assessment in nurses from a general emergency service

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ORIGINAL ARTICLE

Burnout assessment in nurses from a general emergency service

Avaliação do burnout em enfermeiros de um serviço de urgência geral

Evaluación del burnout en enfermeros de un servicio de urgencia general

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ABSTRACT

Objective: To assess the level of Burnout among nurses in a general emergency department. **Method:** Quantitative, descriptive, correlational and cross-sectional study. 32 nurses from a general adult emergency department answered a questionnaire to evaluate Burnout. (Copenhagen Burnout Inventory). **Result:** It was verified that 59.4% of the nurses presented total Burnout. Work-related burnout was the subscale with the highest average score. It was found that the lower the age and the longer the time working in the institution, the higher the level of Burnout. Longer professional experience was related to lower levels of Burnout. There were also higher scores of Burnout among participants who thought about changing their profession, their institution or their service. **Conclusion:** The prevalence of Burnout is high. Professional Burnout was the most critical subscale. Age and the current work are the subscales that most influence perceived Burnout.

Descriptors: Professional Burnout; Psychological Stress; Nursing; Emergencies; Working Conditions.

RESUMO

Objetivo: Avaliar o nível de *Burnout* dos enfermeiros de um serviço de urgência geral. **Método:** Estudo quantitativo, descritivo, correlacional e transversal. Participaram 32 enfermeiros de um serviço de urgência geral de adultos que responderam a um questionário para avaliar o *Burnout*. (Copenhagen Burnout Inventory). **Resultados:** Verificou-se que 59,4% dos enfermeiros estavam em *Burnout* Total, sendo o *Burnout* relacionado com o trabalho, a dimensão com valor mais elevado. Apurou-se que quanto menor a idade, quanto mais tempo na instituição, maior o nível de *Burnout*. Quanto mais tempo de exercício profissional, menor o *Burnout*. Verificou-se ainda valores mais elevados de *Burnout* nos participantes que pensam em mudar de profissão, nos que pensam em mudar de instituição e mudar de serviço. **Conclusão:** A prevalência de *Burnout* é elevada. O *Burnout* profissional é a dimensão mais prejudicada. A idade e o contexto de exercício são as dimensões que mais influenciam a perceção de Burnout.

Descritores: Esgotamento Profissional; Enfermagem; Estresse Psicológico; Emergências; Condições de Trabalho.

RESUMEN

Objetivo: Evaluar el nivel de *Burnout* de los enfermeros de un servicio de urgencia general. **Método:** Estudio cuantitativo, descriptivo, correlacional y transversal. Participaron 32 enfermeros de un servicio de urgencia general de adultos que respondieron a un cuestionario para evaluar el *Burnout*. (Copenhague Burnout Inventory). **Resultados:** Se verificó que el 59,4% de los enfermeros estaban en *Burnout* Total, siendo el *Burnout* relacionado con el trabajo, la dimensión con valor más elevado. Se ha comprobado que cuanto menor es la edad, cuanto más tiempo en la institución, mayor es el nivel de *Burnout*. Cuanto más tiempo de ejercicio profesional, menor el *Burnout*. Se verificaron aún valores más elevados de *Burnout* en los participantes que piensan en cambiar de profesión, en los que piensan en cambiar de institución y cambiar de servicio. **Conclusión:** La prevalencia de *Burnout* es elevada. El *Burnout* profesional es la dimensión más perjudicial. La edad y el contexto de ejercicio son las dimensiones que más influyen la percepción de *Burnout*.

Descriptores: Agotamiento Profesional; Enfermería; Estrés Psicológico; Emergencias; Condiciones de Trabajo.

INTRODUCTION

Work is one of the ways of meetings diverse human needs, such as self-realization, maintenance of interpersonal relationships and survival. At the same time, it may represent a threat when it poses health risks and the workers do not have enough resources to protect themselves. These uncontrolled risk factors can be associated with the Burnout syndrome[1].

There is no single definition of the Burnout syndrome, however, the most widely accepted one describes it as a state of physical, emotional, and mental exhaustion caused by long-term involvement in situations that are emotionally demanding in the workplace[2]. While stress, a related concept, is a phenomenon of temporary adaptation to an external or internal stimulus, Burnout results from a failure of adaptation to prolonged and recurrent exposure to job stress. It is a chronic dysfunction[3] that generally affects professionals who are in direct contact with people, and it is common among health professionals[4].

Maslach et al.[5] consider that Burnout is a multidimensional syndrome composed of three subscales: emotional exhaustion, depersonalization, and reduced personal accomplishment. Emotional exhaustion is characterized by lack of energy and enthusiasm and a feeling of depletion of emotional resources. This can be accompanied by feelings of frustration and tension among workers, since they realize that they are no longer able to spend the same amount of energy on the care of their clients or other people as they did before. Depersonalization is characterized by an emotional insensitivity, which makes the professional interact with clients, colleagues and with the organization in a dehumanized manner. Reduced personal accomplishment is characterized by a negative self-assessment of workers, who become unhappy and unsatisfied with their professional development, and present a consequent decline in feelings of competence and success, as well as in their ability to interact with others[6]. Several authors have described the process, the manifestations and the sequence of the different subscales of Burnout, giving consistency to the concept, opening possibilities for its measurement and proposing evolutions of the original subscales[2-4]. The Copenhagen Burnout Inventory is one of the latest measurement tools for Burnout and consists of three scales: Personal Burnout, Work-related Burnout, and Client-related Burnout[4].

Burnout among nurses

In studies with different professions, the Burnout syndrome is highlighted as predominant among nurses. Burnout affects nurses all over the world in a variety of work contexts. It brings negative consequences for workers and their clients, and feelings of frustration, coldness and indifference stand out[7].

According to França & De Martino[7], in the experience of health professionals, the lack of adaptation to the needs arising from the mental structure and ergonomic contents of tasks translates into dissatisfaction, distress or an anxiety condition, rarely expressed in words or explained by workers themselves. On the other hand, Martins & Valente[8] affirm that the intense workload, the provision of care, the nurse-client relationship and other responsibilities are important stressors in terms of physical and mental exhaustion. These factors generate high levels of tension, distress and anxiety which lead to absenteeism, neglected tasks, job switch, health problems, and even work leaves.

The nursing care itself and the organizational characteristics related to rampant capitalism, competitiveness and search for quality and productivity reinforce the mechanisms of stress development[9-10]. Batista et al.[11] believe that stress, which is a precursor of Burnout, is a multi-causal process with individual, social and organizational repercussions. In addition, this study demonstrated the need to detect early variables associated with nursing team work.

Faced with the impact of stress and Burnout, three levels of effective preventive interventions can be emphasized: *organizational strategies*, which are applied to the work environment; *individual strategies*, focused on personal responses and emotional self-regulation during stressful situations; and *combined strategies*, which focus on the interaction between the occupational and individual contexts[9-12].

Burnout among nurses of a general emergency department

Nursing professionals who work in emergency services are the most susceptible to this syndrome. The mission of these professionals is to help clients with acute conditions, trauma, life-saving situations, among others, so they have to manage suffering, disablement and even death[13]. The job places heavy demands on the professional, as it requires attention, concentration and strength, both in physical and emotional dimensions. Therefore, nurses must be aware that they need to protect themselves in order to carry out their professional activities without damaging their own health[8,14]. The stressful elements in nursing work are related to excessive mental work, such as the pressure experienced in unpredictable situations that require rapid decision-making and the excessive workload[14]. Filgueira et al.[15] believe that scenes of constant violence and the provision of direct care for critically ill clients are determinants of professional burnout, which can lead to psychic and physical illness. This problem must be considered collective and institutional, and not only an individual problem[16]. Therefore, it is important to find effective coping strategies.

Coping strategies

To deal with the problems that arise in the work and in the institution, nurses need to manage the different functions they perform within the same service, pondering, delegating and establishing priorities to solve different situations[17]. According to Silva et al.[18] there are possible strategies to reduce burnout among nurses: discussion about workload and number of working hours; better wages; psychological follow-up for workers who deal with pain, suffering and death; promotion of emotional support among co-workers; and analysis of mental health conditions related to stress at work in the periodic examinations. These strategies will be viable when Burnout stops being regarded as an individual responsibility or a problem related only to the professional-user relationship, and starts being recognized as a problem of the individual-work-process-organization relationship[19].

according to the days worked); and 2 (6.25%) have a fixed-term contract (lasting for an established period of time).

Regarding the last vacation taken: 9 nurses (28.1%) reported that it was one month before the interview; 6 (18.8%) took a vacation two months before; 1 (3.1%) three months before; 3 (9.4%) four months before; 2 (6.3%) five months before; 5 (15.6%) six months before; 3 (9.4%) seven months before; 1 (3.1%) eight months before; and 2 (6.3%) nine months before.

When asked if they thought about changing profession in the last month, 17 nurses (53.1%) answered yes, while 15 (46.9%) answered that they did not; when asked about their desire to change institutions, 14 (43.8%) answered yes and 18 (56.3%) answered no; and when questioned about desire to change service, 15 (47.9%) showed willingness to do so, while 17 (53.2%) wished to stay in the same service.

Burnout perception among nurses

Regarding the levels of Burnout, the following results were obtained in each subscale: in the Personal Burnout scale the mean value was 51.4%; in the Work-related Burnout scale the mean score was 58.5%; in the Client-related Burnout scale the mean score was 53.1%. In all 3 subscales a high level of Burnout was found. Regarding total burnout, the mean score was 54.33%, which corresponds to Total burnout. Regarding the number of nurses with total burnout, 78.1% (n=25) of nurses presented total burnout, while 21.9% (n=7) did not (Table 1).

All of these items are significantly related to the Burnout syndrome. The work-related Burnout is the subscale that most contributes to Total burnout (r_s=.946; p<0.001), as shown in the correlation table (Table 2).

Table 1 – Number of nurses with a high level of total burnout and in the subscales personal burnout, work-related burnout, and client-related burnout, Lisbon, Portugal, 2017

		n	%
Personal Burnout	Low level of Burnout	13	40.6
	High level of Burnout	19	59.4
Work-related Burnout	Low level of Burnout	10	31.3
	High level of Burnout	22	68.7
Client-related Burnout	Low level of Burnout	10	31.2
	High level of Burnout	18	56.3
Total Burnout	Low level of Burnout	7	21.9
	High level of Burnout	25	78.1

Table 2 – Correlation between the subscales personal burnout, work-related burnout and client-related burnout with the total Copenhagen Burnout Inventory (CBI) scale, Lisbon, Portugal, 2017

		Total Burnout	Personal Burnout	Work-related Burnout	Client-related Burnout
Total Burnout	Pearson's Correlation	1	.943**	.946**	.925**
	n	32	32	32	32

Note: ** Correlation is significant at the 0.01 level; r_s = Pearson's Correlation Test.

Burnout perception in association to the socio-professional characteristics of nurses

Regarding Burnout levels and their association to social, demographic and occupational variables, no statistically significant relationship was found between Burnout and gender (*t-test*(30)= 1.910; p=.066). Nonetheless, male nurses presented a mean score of 65, while females had a mean score of 55.33. It was found that the lower the age the higher the Total Burnout (r_s=-.449; p=0.010) and the Client-related Burnout (r_s=-.559; p=0.001).

Regarding the level of education, the differences observed in Burnout levels were not statistically significant (*t-test*(30)= 0.385; p=.703). Nurses with a teaching license degree presented a mean score of 60.14, while nurses with a master's degree had a mean score of 63.67. Likewise, no statistically significant difference was found between different professional categories (p> 0.05), employment in another institution (p> 0.05), type of schedules (p> 0.05), weekly workload (p> 0.05) and the type of employment contract (p> 0.05).

Table 3 – Variables with significant differences in the levels of Burnout, Lisbon, Portugal, 2017

Variable	Category	Mean level of Burnout	Standard deviation	Statistical significance test
Age				r_s=-0.449 p=0.010
Desire to change profession	Yes	68.65	14.20	*t test*(30gl)=4.06; p<001
	No	51.20	9.31	
Desire to change institution	Yes	72.21	11.32	*t test*(30gl)=5.475; p<001
	No	51.33	10.20	
Desire to change service	Yes	69.53	14.68	*t test*(30gl)=3.911; p<001
	No	52.47	9.78	

Note: r_s= Pearson's correlation test; t test= Student's t-test; df= degrees of freedom

Regarding the correlation between Burnout and time of experience, it was verified that: the longer the time in the profession, the lower the Burnout (r_s=-.222; p=.105); the longer the time in the institution, the higher the Burnout (r_s=.119; p=.415); and the longer the time spent since the last vacation, the lower the Burnout (r_s=-.203; p=.265) with statistically non-significant relationships.

It was also verified that nurses who think about changing professions present higher levels of Burnout (*t test*(30df)=4.06; p<0.001), such as those who think about changing institutions (*t test*(30df)=5.475; p<0.001) and those who consider changing service (*t test*(30df)=3.911; p<0.001), as shown in Table 3.

DISCUSSION

The results obtained demonstrate a high prevalence of Burnout in nurses of an emergency department of a general hospital, with values similar to several studies performed with analogous populations[1,14,19]. These data highlight the magnitude of the problem and the attention that should be given by human resource managers. In addition, it justifies the need to keep investigating and monitoring the relationship between work-related variables and personal subscales of professionals.

No statistically significant relationship was found between Burnout levels and gender, as in other studies[20,22] that also concluded that gender does not significantly interfere with Burnout perception. However, this study found higher levels of Burnout among males than among females. These data contradict other studies[22-23] that found that women are more vulnerable to Burnout due to emotional involvement, role conflicts (double journey, career and domestic life) and also because the nursing is a predominantly female profession.

Younger professionals presented higher levels of Burnout. These results are consistent with some studies[1,13-14,24-26] that raise the possibility that professional immaturity and lack of confidence are related to lack of commitment to work, which in turn contributes to the perception of Burnout. On the other hand, research has revealed interesting and contradictory data. In some studies, age is presented as a factor that does not interfere with the presence and levels of Burnout[26]. Other studies mentioned that age alone is not associated with the onset of Burnout, but that this syndrome is related to a set of factors which include age[15]. In this study, it was noted that Client-related Burnout is higher among younger professionals, which may be related to the initial difficulty of managing this relationship.

The data showed that people with a higher level of education presented higher levels of Burnout. Other studies[17] have found that professionals with more academic training performed activities with heavier responsibilities and demands. However, we must consider that our sample had a reduced number of specialists and/or nurses with master's degrees.

The number of working hours, which can be associated with high productivity and higher energy expenditure, can lead to instabilities in the individual, in his quality of life, in his relationship with others, and in the quality and safety of the care provided to clients[27]. Several studies[13,25,28-29] consider that workload is a relevant factor for Burnout syndrome, because the higher the workload, the higher the level of Burnout. However, other authors[27] found that this factor does not interfere with the existence of Burnout, which is in agreement with the results obtained in this study. It should be noted that the weekly workload common in public services and legally regulated in Portugal is of 40 hours. Some nurses work more hours, as they are also employed in other institutions.

Regarding the time in the profession, several studies demonstrate that professionals with longer work experience have more professional maturity, work more safely and can keep control during times of stress[1,3,23], which corroborates the results found in this study.

The data point out that vacations serve as a protective factor for Burnout. In the population studied, all had been on vacation in the prior 12 months, and the most significant part had been on vacation in the prior six months. We could wonder if the time elapsed since the last vacation could influence perceived Burnout, but the relationship found was not significant.

An implication for practice is that more attention should be given to factors that may be relevant to the quality of care, including perceived Burnout, which is high among nurses in the context of emergency services. The implications of this syndrome on people's quality of life and on the quality of care is acknowledged.

The data from this study also demonstrated the need to conduct more research on this topic, within a logic of local dimension, focused on human resources management and on optimizing strategies to obtain better health outcomes and improve levels of satisfaction and well-being among professionals. Studies with larger populations, but still focused on the particularity of each service are necessary. In addition, a syndrome with such a high prevalence should be included in nursing education, with the objective of preparing students to identify, prevent, evaluate and minimize it, and to understand how it interferes with the quality of care.

Limitations of the study

A clear limitation of this study was the small number of participants in the sample. Another limitation in the discussion of these findings is related to the small number of studies with nursing teams of Portuguese emergency services.

Contributions to the area of Nursing, health or public policy

The intention of this study was to promote reflection on one of the determining factors for professional performance and quality of nursing care, specifically in an emergency department. Work is one of the ways of meetings diverse human needs, such as self-realization, maintenance of interpersonal relationships and survival. The professional subscale is the factor that is most associated with perceived Burnout and special attention should be given to the initial phases of the professional career, since this period is associated with higher levels of Burnout, and with an early intention to change service, institution and even profession.

CONCLUSION

There is a high prevalence of Burnout among health professionals in general and among nurses in particular. The data in this study demonstrate that Professional Burnout is the most critical subscale of Total Burnout, which requires human resource managers to devote more attention to how workers perceive their working conditions and to whether their stress levels are not in fact the experience of Burnout.

The fact that there are high levels of Burnout among those who want to change service and even institution, in addition to the fact that the relationship with longer work experience is not statistically significant, demonstrates that the current work conditions are what determine higher levels of Burnout.

Age was the most relevant factor related to Burnout. Younger age is associated with higher Burnout score, which is related to the appropriate strategies for integration and professional development in the initial phase of the career. We also found data that, despite their statistical insignificance, seem relevant due to its the clinical importance and association with well-being, such as the time working in the institution and the intention to change profession, institution and service.

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Burnout among workers in emergency Departments in Palestinian hospitals: prevalence and associated factors

Motasem Hamdan* and Asma'a Abu Hamra

Abstract

Background: Working in Emergency Departments (EDs) entails high work pressure and stress due to witnessing human suffering and the unpredictable nature of the work. This environment puts personnel at risk of burnout. This analysis aims to assess burnout levels and associated risk factors among health workers in EDs in Palestinian hospitals. Also, it examines the association between burnout and workplace violence, as well as with job turnover.

Methods: Cross-sectional design utilising a self-administered questionnaire was used to collect data from all workers at 14 EDs; 8 from the West Bank and 6 from the Gaza Strip. Burnout was measured using Maslach Burnout Inventory-Human Services Survey.

Results: A total of 444 workers (response rate 74.5%) participated: 161(36.3%) nurses, 142(32.0%) physicians and 141(31.7%) administrative personnel. Results showed high levels of burnout among EDs workers; 64.0% suffered from high emotional exhaustion, 38.1% from high depersonalization and 34.6% from low personal accomplishment. In addition, high levels of emotional exhaustion (72.3%) was significantly prevalent among physicians compared to nurses (69.8%) and administrative workers (51.4%) ($p < 0.05$). In comparison, high levels of depersonalization was significantly prevalent among nurses (48.8%) compared to physicians (32.1%) and administrative workers (31.9%) ($p < 0.05$). However, there were no significant differences in the levels of personal accomplishment burnout among the three groups ($p > 0.05$). Moreover, high degree of burnout was more prevalent among EDs workers in the West Bank than among those working in the Gaza Strip (OR 2.02, 95% CI = 1.11–3.69, $p = 0.019$), and higher among younger workers (aged ≤30 years old) than their older counterparts (OR 2.4, 95% CI = 1.302–4.458, $p = 0.005$). Exposure to physical violence was significantly associated with having a high degree of burnout (OR 2.017 95% CI = 1.121–3.631, $p = 0.019$), but no association was observed with regards to exposure to verbal violence ($p > 0.05$). Finally, burnout was significantly associated with workers' intention to leave work at EDs ($p < 0.05$).

Conclusions: Burnout is considerably prevalent among EDs' workers, especially nurses and physicians. Burnout is positively associated with job turnover intention and also with exposure to workplace violence. Therefore, there is a need for prevention and management strategies to address occupational burnout and reduce negative consequences on workers, patients and organisations.

Keywords: Burnout, Mbi-Hss, Emergency department, Turnover, Workplace violence

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Background

Occupational burnout is a psychological disorder that is usually prevalent among employees who work in stressful environments [1]. It has been defined by Maslach & Jackson [2] as, "a syndrome of emotional exhaustion, depersonalization and reduced personal accomplishment that can occur among individuals who do 'people work' of some kind." Burnout is common among emergency department (ED) staff [3]. The prevalence of high levels of burnout among ED workers has been attributed to high work pressure, shortages of resources and the nature of care along with witnessing human suffering [4, 5]. Moreover, ED workers are exposed to high risk of workplace violence from patients and visitors [6, 7], such that burnout has been associated with exposure to violence [8, 9]. Evidence shows that ED workers who have been exposed to workplace aggression have a significantly higher percentage of emotional exhaustion and depersonalization [10]. Thus, burnout has potential negative consequences for the healthcare provider (physical and mental), the patient (e.g. quality of care, patient satisfaction) and the health care organisations (e.g. higher absenteeism, turnover, job dissatisfaction, higher costs and financial losses) [1, 11–13]. In specific, turnover intention is more prevalent among employees with high-degree burnout in health care institutions [14–16].

Palestinians in the West Bank (WB) and the Gaza Strip (GS) have been living under prolonged military occupation. This conflict has affected all aspects of people's lives and still constitutes a real challenge for Palestinians health and the functioning of the health care system. Under circumstances of ongoing conflict, the Palestinian emergency services are carried out under a huge pressure, with insufficient human resources, lack of medication and life-saving equipment, and sometimes, as in the case of Gaza, with frequent electricity cuts. The demand on medical services frequently increases with the flare of Israeli violence against Palestinians, where EDs become overwhelmed with the influx of injuries and traumas. These conditions are probably emotionally and physically challenging for the workers of these departments.

Despite the importance of this issue, evidence about burnout among workers in emergency care services in conflict settings is very limited. The current study complements earlier analysis of workplace violence in Palestinian EDs [7] and aims to assess burnout levels and associated factors among workers in EDs. Moreover, the study aims to examine the association between burnout and workplace violence, as well as with job turnover in EDs.

Methods

Design and setting

A cross-sectional design was used to assess the level of burnout among physicians, nurses and admission/registration personnel working in 14 EDs (out of a total of 39 departments) in public and non-governmental hospitals, of which 8 EDs were from the WB and 6 from the GS. These hospitals are the main providers of emergency medical services. At least two hospitals were selected from each of the north, central and south geographic areas of the WB and GS, taking into consideration the representation of the public and non-governmental sectors. It is important to indicate that public hospitals are the main providers of emergency care in Palestine. In addition, Gaza's hospitals have a larger capacity and number of staff in EDs due to the considerable need for emergency and trauma services in relation to the ongoing wars on the GS.

Population and sample

All employees of the selected hospitals were targeted due to the small number of EDs workers. At the time of study, their number was estimated to be 596 workers, of which 216 were nurses, 201 physicians and 179 administrative/support staff (e.g. registration and reception workers). Those who had an experience of less than one year in the ED and trainees were excluded from the study. Including participants with at least one year experience in EDs originally [7] was intended to calculate the prevalence of workplace violence in the past year.

Data collection instrument

Data were collected using a self-administered questionnaire (Additional file 1). Burnout was measured through the widely used Maslach Burnout Inventory-Human Services Survey (MBI-HSS) [17]. The Arabic version of MBI-HSS is a validated instrument for measuring burnout among health care workers [18, 19]. The MBI-HSS measures burnout using 22 items grouped in three scales: emotional exhaustion (9 items), depersonalization (5 items) and (reduced) personal accomplishment (8 items). *Emotional exhaustion* measures feelings of being emotionally overextended and exhausted by one's work; *depersonalization measures* the development of negative, cynical attitudes toward the recipients of one's services; and *personal accomplishment* measures feelings of competence and successful achievement in one's work [2, 17]. Participants were asked to answer the MBI items based on how often they experience these feelings on a 7-point Likert scale ranging from 0 (never) to daily (6). The data collection instrument also included sections on the characteristics of the participants and on exposure to workplace violence (physical and non-physical) during the last 12 months. In addition, participants were asked to indicate their intention to quit work at EDs using a five points Likert scale (Very Likely - Likely - Not decided- Less likely - Not at all). The internal consistency of the survey was tested using Cronbach's alpha coefficient ($\alpha = 0.901$).

Data collection

Ethical approval to conduct the study was issued by the institutional review board at Al-Quds University and permissions were obtained from the hospital administrations. Anonymous surveys were distributed with a cover letter that included the aim of the study, survey instructions, as well as an informed consent. Data collection took place in the period between July to September of 2013. Data was collected by trained researchers. Surveys were administered to the participants and collected back in sealed envelopes.

Statistical analysis

Data entry and statistical analyses were performed with the Statistical Package for Social Sciences (SPSS) software version 19.0. Descriptive statistics were performed for all the study variables. Bivariate analysis using chi-square tests (χ^2) was used to test for association between MBI subscales and job categories. In addition, prevalence of high degree of burnout was calculated. Whereas high degree of burnout corresponds to having high score on emotional exhaustion, high score on depersonalisation, and low score on personal accomplishment subscales. Odds ratios and 95% CI were used to assess associations between experiencing high degree of burnout and participant characteristics as well as exposure to workplace violence (physical and non-physical). Adjusted odds ratios and 95% CI were used to assess the associations between MBI subscales and intention to quit work in EDs. *P*-value <0.05 was considered as statistical significance in all analyses.

Results

Participant characteristics

Table 1 summarizes the characteristics of the participants. The total number of participants was 444 workers, with a response rate of 74.5% from the target population (nurses 80.1%, physicians 65.8%; and administrative personnel 78.8%). Respondents were mostly from the GS (70.5%) and were workers in governmental hospitals (72.7%). Moreover, 68.3% of participants were clinicians (nurses 36.3% and physicians 32.0%), 76.8% males, 52.5% above 30 years of age, 56.3% had experience of less than 5 years in EDs and 67.6% had a bachelor's degree or higher.

Table 1 Demographic and professional characteristics of participants (*n* = 444)

Variables	Number	Percent
Region		
West Bank	131	29.5
Gaza Strip	313	70.5
Sector		
Governmental	323	72.7
Non-governmental	121	27.3
Gender		
Male	341	76.8
Female	103	23.2
Age		
≤ 30 years	211	47.5
> 30 years	233	52.5
Job category		
Physician	142	32.0
Nurse	161	36.3
Administrative/support	141	31.7
Experience in EDs		
< 5 years	250	56.3
5–9 years	111	25.0
≥ 10 years	83	18.7
Level of education		
< Bachelor's	144	32.4
≥ Bachelor's	300	67.6

Prevalence of burnout

Table 2 shows the prevalence of burnout among workers of EDs in Palestinian hospitals. Among them, 64% reported high levels of burnout on emotional exhaustion, 38.1% on depersonalization and 34.6% on the reduced personal accomplishment subscales. Moreover, high levels of emotional exhaustion (72.3%) was significantly prevalent among physicians in comparison to nurses (69.8%) and administrative workers (51.4%) ($p < 0.05$). In comparison, high levels of depersonalization was significantly prevalent among nurses (48.8%) compared to physicians (32.1%) and administrative staff (31.9%) ($p < 0.05$). However, there were no significant differences in the levels of personal accomplishment burnout among the three groups ($p > 0.05$).

Factors associated with prevalence of high degree of burnout

Table 3 shows the association between the prevalence of high degree of burnout and participants' characteristics as well as exposure to workplace violence in the last year. Odds ratios (Table 3) revealed that a high degree of burnout was significantly higher among workers in the WB hospitals than among those who work in the GS (OR 2.02, 95% CI = 1.11–3.69, $p = 0.019$), and higher among younger workers (aged ≤ 30 years old) compared to their older counterparts (OR 2.4, 95% CI = 1.302–4.458, $p = 0.005$).

In addition, burnout was significantly associated with exposure to workplace violence (Table 3). Workers who had been exposed to physical violence in the last year were 2 times more likely to experience a high degree of

Table 2 Levels of (MBI) burnout among emergency department by job category

MBI Subscales	Level[a]	Job category				X^2 (p-value)
		Physician N(%)	Nurse N(%)	Admin/support N(%)	Overall N(%)	
Emotional Exhaustion	Low	10(7.1)	19(11.9)	35(25.4)	64 (14.6)	23.67($p < 0.001$)
	Moderate	29(20.6)	29(18.2)	32(23.2)	90 (20.5)	
	High	103(72.3)	111(69.8)	71(51.4)	284 (64.8)	
Depersonalization	Low	53(37.9)	50(31.2)	55(39.9)	158 (36.1)	12.53(0.014)
	Moderate	42(30.0)	32(20.0)	39(28.3)	113 (25.8)	
	High	45(32.1)	78(48.8)	44(31.9)	167 (38.1)	
Personal Accomplishment	Low	45(32.1)	51(32.1)	55(39.9)	151 (34.6)	5.39(0.249)
	Moderate	31(22.1)	29(18.2)	32(23.2)	92 (21.1)	
	High	64(45.7)	79(49.7)	51(37.0)	194 (44.4)	

[a]The level of burnout classification is done based on MBI-HSS [12]
χ^2: Pearson Chi-Square; p: P-value

burnout (OR 2.017 95%CI 1.121–3.631, $p = 0.019$), but no association was observed with regards to exposure to verbal violence ($p > 0.05$).

Effect of burnout on turnover intention

Table 4 shows the significant association between burnout and workers' intention to leave work at EDs. EDs workers who had a high level of emotional exhaustion were about 5 times more likely to quit their job than those with a low level of emotional exhaustion (95% CI 2.163–12.194, $p = 0.001$). Also, those who had a high level of depersonalization were about 3 times more likely to quit work in EDs (95% CI = 1.424–5.288, $p = 0.003$) compared to those with a low level. However, there was no significant association between personal accomplishment level and turnover intention ($p > 0.05$).

Discussion

In the present study, the findings showed that burnout is very high among workers in the EDs of Palestinian hospitals in comparison with evidence from the region [8, 9, 18, 19]. In particular, emotional exhaustion was highly prevalent. Maslach and colleagues (2001) [1] indicated that emotional exhaustion is associated with health problems and can negatively influence the metal health and well-being of personnel, leading to feelings of anxiety, depression and loss of self-esteem. Emotional exhaustion has been attributed to high workload, job stress and lack of control over the work environment [1]. In Palestine, the high levels of emotional exhaustion among ED workers can be explained by the excessive work pressure, which is due to the ongoing conflict in the occupied territories and the consequent large number of injuries and traumas, which require emergency care, as well as the ordinal patients seeking care in these departments. Consequently, workers experience considerable job stressors while dealing with life threatening situations and treating severe war injuries and time pressure. Adding to that, Palestinian hospitals work under difficult conditions and suffer from shortages of human resources, medicines and equipment.

An interesting finding was that despite the extremely difficult work conditions of Gaza hospitals, workers in the WB had higher levels of burnout compared to their colleagues in Gaza. This shows that GS workers are more resilient to work pressure and have stronger capacities to cope with the stressful environment of emergency services.

Consistent with earlier results [5, 9], administrative workers had lower burnout levels than physicians and nurses. Physicians had the highest levels of emotional burnout. This has been attributed to the emotional stress and to the responsibility and accountability of physicians to their patients [20]. In comparison, nurses had a higher depersonalization burnout than physicians and administrative/support workers. This might be due to the fact that nurses have more contact with patients and families compared to other health personnel, and therefore, they are the most to experience depersonalisation. No significant differences were observed between job categories in the personal accomplishment domain and our results were very similar to the findings of Alameddine and colleagues (2011) [9]. Furthermore, our findings showed that high levels of burnout were significantly reported by younger personnel. With time, older workers learn how to manage occupational stressors successfully and become more resilient and adaptive to burnout [21].

Table 3 Prevalence of high degree of burnout and odds ratios associated with the characteristics of workers and exposure to workplace violence

Variables	High burnout[a] N(%)	OR	95% CI	p-value
Region				
West Bank	22(17.2)	2.02	1.11–3.69	0.019
Gaza Strip	29(9.3)	Ref		
Sector				
Governmental	36(11.2)	Ref		
Non-governmental	15(12.7)	1.15	0.6–2.19	0.665
Gender				
Male	43(12.7)	1.69	0.769–3.733	0.168
Female	8(7.9)	Ref		
Age				
≤ 30 years	34(16.2)	2.4	1.302–4.458	0.005
> 30 years	17(7.4)	Ref		
Job category				
Physician	14(9.9)	3.36	0.741–15.261	0.065
Nurse	24(15.0)	5.382	1.233–23.498	
Administrative/support	11(14.7)	Ref		
Experience in EDs				
< 5 years	32(13.0)	1.57	0.666–3.716	0.301
5–9 years	12(10.8)	1.28	0.481–3.413	0.620
≥ 10 years	7(8.6)	Ref		
Level of education				
< Bachelor's	17(11.8)	1.03	0.553–1.909	0.931
≥ Bachelor's	34(11.5)	Ref		
Physical violence				
No	25(49.0)	Ref		
Yes	26(51.0)	2.017	1.121–3.631	0.019
Non-physical violence				
No	10(19.6)	Ref		
Yes	41(80.4)	1.792	0.868–3.697	0.115

[a] High degree of burnout is defined as having high score on emotional exhaustion, high score on depersonalisation, and low score on personal accomplishment
OR Odds ratio, CI Confidence Interval

Workplace aggression in EDs negatively affects the mental health and well-being of the workers. The psychological and emotional consequences of exposure to workplace violence, such as burnout, anxiety and depression are considerable [10, 22]. In line with earlier studies, our results showed that exposure to workplace violence was significantly associated with increased levels of burnout in the area of emotional exhaustion and depersonalisation [8]. As reported by an earlier study on workplace violence in Palestinian EDs [7], exposure to violence and aggression towards nurses and physicians tends to contribute to the development of a negative and detached response towards the job, such as decreasing contact and time spent with patients and their families. Moreover, the study showed that ED workers significantly expressed feelings of hopelessness, disappointment, fear and anxiety following an exposure to violent incidents.

Job turnover of physicians and nurses is a growing challenge to the functioning of health care systems in many countries. Burnout has an impact on job dissatisfaction and consequently on job turnover [1]. Our findings, in agreement with the results of other studies [9, 11, 15, 23] showed that turnover intention was positively associated with burnout syndrome. ED workers who have suffered from serious burnout on the

Table 4 Adjusted odds ratios and 95% CI for the effect of burnout syndrome on turnover intention

Burnout subscales	OR*	95% CI	p-value
Emotional exhaustion			
Low	Ref		
Moderate	2.7	1.009–7.243	0.048
High	5.13	2.163–12.194	0.001
Depersonalization			
Low	Ref		
Moderate	1.77	0.903–3.459	0.096
High	2.74	1.424–5.288	0.003
Personal accomplishment			
Low	Ref		
Moderate	1.04	0.554–1.939	0.910
High	0.994	0.485–2.038	0.987

*Adjusted for age, gender, region (West Bank/Gaza Strip)

dimensions of emotional exhaustion and depersonalization were inclined to report higher degrees of turnover intention, but not necessarily on the reduced personal accomplishment dimension.

The current study had many points of strength in that it studied all types of workers in the EDs; included all providers of care in both regions of the country; and had a relatively large sample with a high response rate (74.5%). As for the limitations, this study adopted a cross-sectional design, which makes it difficult to draw proper conclusions on causal effect relationships. Also, the study relied on self-reporting and that might have produced a social desirability bias in the responses of participants.

Conclusions

Burnout is clearly prevalent among Palestinian EDs workers, especially among nurses and physicians. In particular, emotional exhaustion is of major concern for the mental health and well being of workers. Corroborating earlier studies, high burnout levels have been found to be positively associated with job turnover intention. Therefore, there is need for prevention and management strategies to address occupational burnout. Interventions should include implementing professional education for emergency workers to raise their awareness and to acquire skills to deal with burnout and reduce destructive consequences of burnout for themselves and for their patients. Also, hospitals should ensure social support to workers and enhance the ED resources in order to avoid workload stress. Finally, there is a need for interventions to manage violence and aggression against health care providers in EDs in order to reduce the consequent burnout and job turnover.

Additional file

Additional file 1: English Translation of the Study Survey. (PDF 600 kb)

Abbreviations

CI: Confidence interval; ED: Emergency department; GS: Gaza Strip; MBI-HSS: Maslach Burnout Inventory-Human Services Survey; OR: Odds ratio; P: P-value; WB: West Bank; χ^2: Pearson Chi-Square

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Availability of data and materials

The datasets analyzed during the current study available from the corresponding author on reasonable request.

Authors' contributions

MH the principal investigator, conceptualized the study design and data collection tool. AH pilot tested and contributed to finalizing the survey. Both authors collected, entered and analyzed the data. MH wrote the manuscript draft in consultation with AH. Both authors read and approved the final manuscript.

Competing interests

The authors declare that they have no competing interests.

Consent for publication

Not applicable.

Ethics approval and consent to participate

Ethical approval was obtained from the institutional review board at Al-Quds University. Anonymous surveys were administered to participants and their informed consent was obtained prior to data collection.

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6. ***Self-esteem, job satisfaction and burnout between general and psychiatric nursing staff***

Article

Self-Esteem, Job Satisfaction and Burnout between General and Psychiatric Nursing Staff: A Comparative Study

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Abstract

The purpose of this study was to compare self-esteem, job-satisfaction and burnout between psychiatric and general nurses as well as to determine how these three elements are interrelated to each other. Like other professionals, nurses are also at risk of developing problems like professional burnout and a sense of dissatisfaction regarding their jobs. Causal factors of burnout among professionals are multi-factorial, starting from socio-demographic and occupational background to one's personality characteristics. In this study, 30 psychiatric nurses and 30 general nurses were selected through a purposive sampling method. This was a one-time cross-sectional hospital-based study, data was collected during the period September, 2008 to November, 2008 and written consent was taken from the subjects. Statistical measures like descriptive statistics, Chi-square test, t-test and Pearson's correlation-coefficient were used to analyze the data. In this study psychiatric nurses had been found to have higher level of self-esteem than general nurses. Nurses working in a general hospital had been observed to have a higher level of burnout and lower job satisfaction than psychiatric nurses.

Keywords

Self-esteem, job satisfaction, burnout, nurses

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Introduction

Efficiency of an organization/institute largely depends on the morale of its employees. Research on functionality of the employees suggests that job satisfaction and job performance are positively correlated. Health care professionals are at high risk of developing burnout syndrome and because of burnout syndrome their work motivation declines. The presence of professional burnout and low job satisfaction among health care professionals could become a negative thing to patients. Because burned out and occupationally dissatisfied professionals usually have low work motivation and morale and they fail to deliver the clinical services that they are supposed to, to their clientele. Health care professionals like nurses are at high risk for burnout, role conflict and job dissatisfaction (Aiken et al. 2001, 2011; Grassi and Magnani 2000; Kalliath and Morris 2002; Koivula et al. 2001; Taylor et al. 1999; Tyler and Cushway 1995). In the 1970s Herbert J. Freudenberger used the word 'burnout' for the first time to describe the boredom and loss of physical and emotional strength or motivation among professionals and workers (Freudenberger 1974). Maslach et al. (2001) defined burnout as 'a prolonged response to chronic emotional and interpersonal stressors on the job'.

In nursing, factors like occupational stressors and low satisfaction about the workplace often operate as pivotal factors for burnout (Elfering et al. 2002; Kalliath and Morris 2002; Poncet et al. 2007; Santos et al. 2003; Shader et al. 2001; Stechmiller and Yarandi 1993; Sveinsdottir et al. 2006; Thomson et al. 1996). Burnout has psychological, psychophysiological and behavioural components (Duquette et al. 1995; Lambert and Lambert 2008; Maslach 1982; Maslach et al. 2001). Adverse working conditions like an unmanageable workload, incompatible and diffused work demands, role ambiguity, frequent interference of administration and traumatic experiences like dealing with death and the dying, shifting between different units of the institution frequently, staying at one particular unit for a long time, dealing with uncooperative family members and patients, low supportive relationship in the workplace, concern about quality nursing and medical care to patients and low job control have a direct relationship with burnout symptoms (Begat et al. 2005; Duquette et al. 1994, 1995; Lambert et al. 2004, 2007; Lambert and Lambert 2008; Snelgrove 1998; Sundin et al. 2007). Factors like self-esteem, generalized self-efficacy, locus of control and emotional stability have significant bearing on the work performances of professionals; persons who already have low self-esteem are mostly susceptible for burnout (Judge et al. 1997, 1998).

Job Satisfaction, Burnout Syndrome and Self-esteem among Psychiatric Nurses

It was proved that stressful hospital work environments are associated with nurse burnout (Maslach 1979). Psychiatric nurses represent the largest professional group providing care to individuals with mental illness in general hospital settings. It is known that these nurses experience stress and that they are vulnerable to burnout. Under such conditions, their patients are more likely to have poor outcomes (Fagin et al. 2008).

Psychiatric nurses have a higher vulnerability to develop burnout syndrome and experience low job satisfaction. Factors like 'working with mentally ill people', 'poor communication with administration and fellow workers', 'generally unsupportive workplace atmosphere', 'lack of respect and acceptance from others', 'low self-esteem', 'lack of professional supervision', 'role conflicts', 'place of job (community based job vs institutionalized job)', 'having less time for own' and 'unstructured working rules and duties and responsibilities' make psychiatric nurses more vulnerable to develop burnout and demotivation

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syndrome (Adali et al. 2003; Dellender et al. 2001; Edwards et al. 2000; Fagin et al. 2008; McLeod 1997; Pines and Maslach 1978; Robinson et al. 2003; Thomsen et al. 2001; Tyson et al. 2002).

Methodology

Aims of the Study

The aims of the present study were to compare the level of self-esteem, job satisfaction and burnout between psychiatric and general nursing staff. The idea behind this study was to elucidate the core areas of the burnout syndrome, identify its triggering as well as protective factors and ascertain causes of dissatisfaction among psychiatric nurses in the Indian context.

Study Design

This study was a cross sectional, hospital based one. Subjects were recruited by a purposive sampling technique. The study was conducted at the Central Institute of Psychiatry (CIP) and Rajendra Institute of Medical Sciences (RIMS) of Ranchi City, Jharkhand, India. For the purpose of the study, 30 female psychiatric nurses from CIP and 30 female general nurses from RIMS, Ranchi, in the age range 30–49 years were selected purposively. Samples of both the groups were matched with regard to their age, duration of service and academic qualifications. The minimum academic qualification for nurses was kept as having a Certificate of General Nursing and Midwifery (GNM). Data was collected during the month of September 2008 to November 2008. Written informed consent was taken from all the selected nurses. Both the CIP and RIMS are public sector tertiary medical facilities. The CIP is a Government of India operated tertiary mental health institute and the RIMS is a multi-specialty medical college and hospital operated by the Government of Jharkhand (A province of the Republic of India).

Instruments used in the Study

Socio-demographic Data Sheet

A semi structured proforma was developed which included various socio-demographic characteristics like age, religion, mother tongue, total monthly income, total duration of employment in CIP/RIMS, domicile status, education, marital status, occupation of spouse, presence of major physical and psychiatric illness in the family, numbers of disciplinary actions faced, history of substance intake, owning a vehicle, travelling time to reach hospital, type of family, whether presently staying with family, number of dependent members and socio-economic status.

Self-Esteem Scale (Rosenberg 1965)

The Rosenberg self-esteem scale was developed by Morris Rosenberg in 1965. The scale can be used to assess global self-esteem and is one of the most widely used self-esteem scales in the field of psychology and sociology. This is a ten-item Likert-type four-point scale—answers range from 'strongly agree' to 'strongly disagree'.

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Job Satisfaction Survey (Spector 1994; Spector and Jex 1998)

The Job Satisfaction Survey is a 36-item, nine-facet scale to assess employees' attitudes about the job and its various aspects. Each facet is assessed with four items, and a total score is computed from all items. A summated rating scale format is used, with six choices per item ranging from 'strongly disagree' to 'strongly agree'.

Copenhagen Burnout Inventory (Kristensen et al. 2005)

It consists of three sub scales: 'personal burnout', which has six items; 'work related burnout' consisting of seven items and 'client related burn out' consisting of six items.

Statistical Analysis

The data was analyzed using the computer software program Statistical Package for Social Sciences-version 15.0 for Windows®, with different statistical measures like 'descriptive statistics', 'chi-square test', 't-Test' and 'Pearson's correlation-coefficient' being used as appropriate (SPSS: IBM).

Results

Table 1 shows the socio-demographic and clinical information of both groups. Certain statistically significant differences were found between the two groups: general nurses had a significantly higher numbers of dependents than psychiatric nurses; significant differences were found in parameters like 'family type' and 'staying with the family'. Though in either group, majority of the nurses were found to live with their family members in the same household and most of them had a nuclear family background, but in the general nursing group a few nurses were also found to be living in hostels or living alone.

Table 2 shows the comparison of occupational profile of psychiatric and general nurses. Monthly incomes of psychiatric nurses were significantly higher than general nurses. Psychiatric nurses were found to be significantly more experienced than general nurses. Most of the nurses in either group were

Table 1. Comparison of Socio-demographic and Medical Profile of Psychiatric and General Nurses

		Total Sample Size N = 60				
Variables	Components of Variables	Psychiatric Nurses $n = 30$ Mean ± SD[1]/n (%)	General Nurses $n = 30$ Mean ± SD[1]/n (%)	t/χ^2	df	p
Age (in years)	–	37.10 ± 5.27	37.10 ± 5.27	0.00	58	1.00
Religion	Hindu	10 (33.3%)	13 (43.3%)	0.64	2	0.72
	Muslim	1 (3.3%)	1 (3.3%)			
	Christian	19 (63.4%)	16 (53.4%)			
Mother Tongue	Hindi	22 (73.3%)	26 (86.7%)	1.66	1	0.19
	Others	8(26.7%)	4 (13.3%)			
Native State	Jharkhand	19 (63.3%)	21 (70.0%)	0.30	1	0.58
	Others States	11 (36.7%)	9 (30.0%)			

(Table 1. continued)

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(Table 1. continued)

Variables	Components of Variables	Total Sample Size N = 60 Psychiatric Nurses n = 30 Mean ± SD[1]/n (%)	General Nurses n = 30 Mean ± SD[1]/n (%)	t/χ^2	*df*	p
Domicile	Urban	15 (50.0%)	21 (70.0%)	2.50	1	0.11
	Rural	15 (50.0%)	9 (30.0%)			
Marital status	Single	1 (3.3%)	5 (16.7%)	2.96	1	0.08
	Married	29 (96.7%)	25 (83.3%)			
Whether Husbands employed	Yes	22 (73.3%)	21 (70.0%)	0.08	1	0.77
	No	8 (26.7%)	9 (30.0%)			
Type of family	Nuclear	26 (86.7%)	21 (70.0%)	6.67	3	0.08*
	Extended	4 (13.3%)	3 (10.0%)			
	Living alone	0	4 (13.0%)			
	Living in Hostel	0	2 (7.0%)			
Staying with family	Yes	28 (93.3%)	20 (66.7%)	6.66	1	0.01**
	No	2 (6.7%)	10 (33.3%)			
Number of dependent members in family (in numbers)		2.23 ± 1.25	3.06 ± 1.38	−2.44	58	0.02*
Presence of any physical illness in nurses	Yes	5 (16.7%)	3 (10.0%)	0.577	1	0.448
	No	25 (83.3%)	27 (90.0%)			

Notes: * Significance at $p < 0.05$ (2-tailed)/ **Significance at $p < 0.01$ (2-tailed).
[1] SD - Standard Deviation.

Table 2. Comparison of Occupational Profile of Psychiatric and General Nurses

Variables		Groups Psychiatric Nurses N = 30 Mean ± SD[2]/n (%)	General Nurses N = 30 Mean ± SD[2]/n (%)	t/x^2	*df*	p
Monthly income (in INR/₹)		₹21733.33 ± 5016.75	₹10133.33 ± 2044.70	10.92	58	0.00**
Total years of employment in CIP/RIMS[3] (in years)		11.26 ± 4.58	7.03 ± 5.02	3.41	58	0.00**
Total years of working experience (in years)		13.60 ± 3.94	11.23 ± 5.12	2.01	58	0.05
Education	GNM/DPN[4]	25 (83.3%)	28 (93.3%)	1.83	2	0.39
	Graduate	4 (13.3%)	2 (6.7%)			
	≥PG	1 (3.4%)	0			

(Table 2 continued)

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(Table 2. continued)

Variables		Groups: Psychiatric Nurses N = 30 Mean ± SD[2]/n (%)	Groups: General Nurses N = 30 Mean ± SD[2]/n (%)	t/x^2	*df*	p
Whether received any memorandum	Yes	1 (3.3%)	1 (3.3%)	0.00	1	1.00
	No	29 (96.7%)	29 (96.7%)			
Having own vehicle	Yes	21 (70.0%)	0	32.31	1	0.00**
	No	9 (30.0%)	30 (100.0%)			
Travelling time to hospital (in minutes)		18.83 ± 15.68	23.06 ± 16.84	−1.01	58	0.32
Any problem with staff (in last one year)	Yes	1 (3.3%)	0	1.02	1	0.31
	No	29 (96.7%)	30 (100.0%)			
Whether called any colleague for help	Yes	15 (50.0%)	10 (33.3%)	1.71	1	0.19
	No	15 (50.0%)	20 (66.7%)			
Whether any colleague helped	Yes	7 (23.3%)	3 (10.0%)	1.92	1	0.17
	No	23 (76.7%)	27 (90.0%)			

Notes: * Significance at $p < 0.05$ (2-tailed)/**Significance at $p < 0.01$ (2-tailed).

[1]Indian Rupee (₹).

[2]SD - Standard Deviation.

[3]Central Institute of Psychiatry/Rajendra Institute of Medical Sciences, Ranchi, Jharkhand State, India.

[4]Diploma in Psychiatric Nursing (this course is pursued after completing the General Nursing and Midwifery (GNM) course with at least two years experience of working in a registered hospital).

Diploma holders in their respective nursing disciplines. Most of the selected psychiatric nurses owned a vehicle (two- or four-wheelers) while none of the general nurses did. The general nurses took more time to reach their hospital from their respective homes than psychiatric nurses. A majority of the nurses in both groups had reported that they did not have any problem with their colleagues during the last year.

Table 3 shows the comparison of level of self-esteem, job satisfaction and burnout. Scores on Rosenberg's self esteem scale were almost identical between psychiatric (24.63±2.17) and general nurses (23.93±1.33). General Nurses had significantly lesser level of job satisfaction than Psychiatric Nurses, scoring significantly less in all the items of the Job Satisfaction Survey barring the 'Operating Condition' domain. General Nurses were found to have a significantly higher level of job burnout than psychiatric nurses.

Table 3. Comparison of Self-esteem, Job Satisfaction and Burnout between Psychiatric and General Nurses

Variables	Groups N = 60: Psychiatric nurses n = 30 Mean ± SD[1]	Groups N = 60: General nurses n = 30 Mean ± SD[1]	t	*df*	p
Rosenberg's Self Esteem Scale	24.63 ± 2.17	23.93 ± 1.33	1.50	58	0.13

(Table 3. continued)

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(Table 3. continued)

Job Satisfaction Survey Scale					
	Groups N = 60				
Variables	Psychiatric Nurses $n = 30$ Mean ± SD[1]	General Nurses $n = 30$ Mean ± SD1	t	*df*	p
Payment	20.83 ± 2.22	7.63 ± 3.11	18.89	58	0.00***
Promotion	14.93 ± 3.22	9.53 ± 3.42	6.29	58	0.00***
Supervision	10.00 ± 3.44	13.96 ± 3.94	2.76	58	0.01**
Fringe benefits	20.06 ± 2.36	8.70 ± 3.50	14.73	58	0.00***
Contingent rewards	13.53 ± 3.24	9.60 ± 3.16	4.75	58	0.00**
Operating conditions	12.26 ± 2.87	13.40 ± 3.60	−1.35	58	0.18
Co-workers	18.73 ± 2.86	16.53 ± 2.14	3.37	58	0.00***
Nature of work	19.63 ± 3.31	14.93 ± 3.49	5.34	58	0.00***
Communication	15.90 ± 3.90	12.63 ± 3.12	3.58	58	0.00***
Total score of JSS[2] scale	152.50 ± 16.04	106.86 ± 14.60	11.52	58	0.00***
Copenhagen Burnout Inventory					
	Groups N = 60				
Variables	Psychiatric Nurses $n = 30$ Mean ± S.D.[1]	General Nurses $n = 30$ Mean ± S.D.[1]	t	*df*	p
Client related burnout	28.19 ± 17.29	37.08 ± 15.75	−1.82	58	0.07
Personal burnout	40.27 ± 14.11	47.22 ± 15.37	−2.08	58	0.04*
Work related burn out	28.19 ± 16.60	38.09 ± 19.65	−2.38	58	0.02*
Total score of CBI[3] inventory	31.88 ± 13.09	40.59 ± 15.15	−2.10	58	0.03*

Notes: Sig. * < 0.05; ** < 0.01.
[1]Standard Deviation.
[2]Job Satisfaction Survey.
[3]Copenhagen Burnout Inventory.

Table 4 shows the Pearson's correlation-coefficient of socio-demographic variables with the areas of burnout (Copenhagen Burnout Inventory), job satisfaction (Job Satisfaction Survey) and self-esteem (Morris Rosenberg's Self-Esteem Scale) of Psychiatric Nurses. A statistically significant correlation was found between communication (Job Satisfaction Survey) and total years of employment at the psychiatric institute. No significant correlation could be observed in any other socio-demographic variables with burnout, job satisfaction or self-esteem.

Table 5 shows Pearson's correlation-coefficient of socio-demographic variables with the areas of burnout (Copenhagen Burnout Inventory), job satisfaction (Job Satisfaction Survey) and self-esteem (Morris Rosenberg's Self-Esteem Scale) of General Nurses. Significant positive correlations were observed between some of the areas of job satisfaction and monthly income, years of working experience

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Table 4. Correlation of Socio-demographic and Occupational Variables with Self-esteem, Job Satisfaction and Burnout of Psychiatric Nurses

		Age	Monthly Income	Total Years of Employment in CIP[1]	Total Years of Working Experience	Travelling Time to Office[1]
MSE[2] Total Score		−0.279	−0.126	−0.052	−0.171	−0.195
Copenhagen Burnout Inventory	Personal burnout	0.071	−0.192	0.057	0.188	0.200
	Work related burnout	0.112	−0.222	0.117	0.132	0.022
	Client related burnout	−0.145	−0.136	−0.058	−0.075	0.128
	Total score of CBI[3] inventory	0.008	−0.220	0.049	0.089	0.131
Job Satisfaction Survey Scale	Payment	−0.260	−0.248	−0.070	−0.125	0.221
	Supervision	−0.054	−0.265	0.090	−0.064	0.114
	Promotion	−0.076	0.004	−0.065	−0.002	0.228
	Fringe benefits	−0.344	−0.094	−0.228	−0.223	0.016
	Contingent rewards	−0.154	−0.048	−0.077	−0.198	−0.201
	Operating conditions	−0.195	−0.019	−0.178	−0.173	−0.241
	Co-workers	0.198	0.021	0.237	0.302	0.001
	Nature of work	0.187	0.122	0.079	0.149	0.306
	Communication	0.312	−0.105	0.371*	0.353	0.060
	Total score of JSS[4] scale	−0.030	−0.111	0.062	0.036	0.099

Notes: * Correlation is significant at < 0.05 level (2-tailed).
[1]Central Institute of Psychiatry, Ranchi, Jharkhand State, India.
[2]Morris Rosenberg Self Esteem Scale.
[3]Copenhagen Burnout Inventory.
[4]Job Satisfaction Survey.

at RIMS and total years of working experience as a nurse. But no significant correlation was observed between the socio-demographic variables with self-esteem and burnout.

Table 6 shows the inter-correlation among the scores of the three scales used in the study to measure self-esteem, burnout and job satisfaction in the experimental group (Psychiatric Nurses). There was a significant positive correlation between self-esteem and payment. There was also a significant positive correlation among job satisfaction with payment, promotion contingent rewards, operating conditions, co-workers, nature of work and communication. A significant positive correlation was also found between work-related burnout and personal burnout and between client-related and work-related burnout.

Table 7 shows the correlation of the scores of the three scales used in the study to measure self-esteem, burnout and job satisfaction in the experimental group (Psychiatric Nurses). A significant positive correlation could be seen between self-esteem with payment, promotion, fringe benefits, contingent rewards and overall job satisfaction. Further, a significant positive correlation between job satisfaction with payment, promotion, supervision, fringe benefits, contingent rewards, nature of work, communication was observed, while there was a significant negative correlation with personal burnout, work-related

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Table 5. Correlation of Socio-demographic Variables with Self-esteem, Job Satisfaction and Burnout of General Nurses

Correlation		Age	Monthly Income	Total Years of Employment in RIMS[1]	Total Years of Working Experience	Travelling Time to Office[1]
MSE[2] Total Score		−0.053	0.300	0.319	0.259	−0.208
Copenhagen Burnout Inventory	Personal burnout	−0.051	−0.204	−0.218	−0.183	0.087
	Work related burnout	0.173	−0.046	−0.043	−0.029	0.092
	Client related burnout	0.009	−0.271	−0.261	−0.203	0.201
	Total score of CBI[3]	0.074	−0.175	−0.175	−0.136	0.140
Job Satisfaction Survey Scale	Payment	0.330	0.570**	0.597**	0.548**	−0.038
	Promotion	0.356	0.592**	0.599**	0.536**	0.054
	Supervision	−0.156	0.048	0.035	−0.041	−0.250
	Fringe benefits	0.405*	0.762**	0.767**	0.663**	−0.312
	Contingent rewards	0.291	0.608**	0.619**	0.526**	−0.240
	Operating conditions	−0.455*	−0.158	−0.178	−0.227	0.040
	Co-workers	−0.328	−0.230	−0.152	−0.244	−0.145
	Nature of work	0.307	0.350	0.360	0.452*	0.109
	Communication	−0.159	−0.069	−0.081	−0.155	−0.155
	Total score of JSS[4] scale	−0.146	0.586**	0.599**	0.477**	−0.209

Notes: * Correlation is significant at < 0.05 level (2-tailed)/**Correlation is significant at < 0.01 level (2-tailed).
[1]Rajendra Institute of Medical Sciences, Ranchi, Jharkhand State, India.
[2]Morris Rosenberg Self Esteem Scale.
[3]Copenhagen Burnout Inventory.
[4]Job Satisfaction Survey.

burnout, client-related burnout and overall burnout. A significant positive correlation among personal burnout, work-related burnout, client-related burnout was observed while a significant negative correlation with self-esteem, promotion, supervision and overall job satisfaction was seen.

Discussion

This cross-sectional study was conducted at the Central Institute of Psychiatry and Rajendra Institute of Medical Sciences, Ranchi. The study was planned to compare the 'job burnout', 'level of job satisfaction' and 'self-esteem' between psychiatric and general nurses. This type of study is very much required in a country like India where day in and day out health care professionals have to deal with the burgeoning needs of people and a small number of professionals have to address the healthcare needs of a huge population. So this study would help people know about the occupation related stress and burnout syndrome of nurses who are appointed in two different types of healthcare facilities. This study included

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Table 6. Correlation of Self-esteem, Job Satisfaction and Burnout of Psychiatric Nurses

Correlation																
Self-esteem	MSE[1] Total Score	1.00														
Copenhagen Burnout Inventory	P.B.	−0.181	1.00													
	W.R.B.	−0.228	0.473**	1.00												
	C.R.B.	−0.128	0.306	0.646**	1.00											
	Total score	−.217	0.687**	0.897**	0.827**	1.00										
Job Satisfaction Survey Scale	Pay	0.471**	−0.003	−.145	0.066	−0.039	1.00									
	Pro	0.114	−0.034	−0.171	−0.078	−0.111	−0.016	1.00								
	Sup	0.196	0.213	−0.246	−0.188	−0.122	0.355	0.268	1.00							
	Fringe	.193	0.141	−0.097	0.002	0.005	0.559**	0.105	0.118	1.00						
	Cont	0.087	−0.052	0.174	0.148	0.139	0.280	0.231	0.227	−0.059	1.00					
	Oper	0.016	0.070	−0.083	−0.041	−0.030	0.308	0.162	0.412*	0.165	0.564**	1.00				
	Co-workers	0.194	0.275	0.013	−0.127	0.041	0.349	0.121	0.570**	0.314	0.090	0.323	1.00			
	N.W.	0.220	−0.100	−0.078	−0.119	−0.123	0.383*	0.117	0.262	0.342	0.141	−0.105	0.276	1.00		
	Com	0.044	−0.050	−0.087	−0.461*	−0.252	0.251	0.216	0.400*	0.079	0.287	0.220	0.577**	0.298	1.00	
	JSS-Total	0.271	0.077	−0.136	−0.184	−0.110	0.609**	0.446*	0.708**	0.435*	0.544**	0.571**	0.693**	0.521**	0.681**	1.00

Notes: * Correlation is significant at < 0.05 level (2-tailed)/**Correlation is significant at < 0.01 level (2-tailed).

Legends:

[1]Morris Rosenberg Self Esteem Scale/[2]Copenhagen Burnout Inventory/[3]Job Satisfaction Survey/PB: Personal Burnout/WRB: Work Related Burnout/CRB: Client Related Burnout/Pay: Payment/Pro: Promotion/Sup: Supervision/Fringe: Fringe benefits/Cont: Contingent Reward/Oper: Operating Rewards/Co.: Co-workers/N.W.: Nature of Work/Com: Communication.

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Table 7. Correlation of Self-esteem, Job Satisfaction and Burnout of General Nurses

Correlation																
Self-esteem	MSE[1] Total Score	1.00														
Copenhagen Burnout Inventory	P.B.	−0.352	1.00													
	W.R.B.	−0.354	0.715**	1.00												
	C.R.B.	−0.356	0.559**	0.702**	1.00											
	Total score	−0.396*	0.846**	0.941**	0.843**	1.00										
Job Satisfaction Survey scale	Pay	0.615**	−0.394*	−0.050	−0.126	−0.188	1.00									
	Pro	0.377*	−0.569**	−0.263	−0.361	−0.423*	0.621**	1.00								
	Sup	0.170	−0.262	−0.533**	−0.560**	−0.526**	−0.243	0.037	1.00							
	Fringe	0.584**	−0.269	−0.159	−0.351	−0.273	0.650**	0.503**	0.129	1.00						
	Cont	0.392*	0.002	−0.038	−0.147	−0.062	0.292	0.348	0.176	0.743**	1.00					
	Oper	−0.073	0.314	−0.061	−0.219	−0.004	−0.481**	−0.177	0.205	−0.200	0.150	1.00				
	Co-workers	0.061	−0.289	−0.268	−0.206	−0.295	−0.088	−0.026	0.410*	−0.152	−0.201	0.029	1.00			
	N.W.	0.280	−0.279	−0.236	−0.100	−0.237	0.473*	0.554**	0.002	0.252	0.156	−0.178	−0.165	1.00		
	Com	0.299	0.086	−0.072	−0.269	−0.097	−0.156	−0.126	0.545**	0.046	0.249	0.390*	0.185	−0.173	1.00	
	JSS-Total	0.624**	−0.367*	−0.395*	−0.555**	−0.488**	0.469**	0.638**	0.522**	0.697**	0.693**	0.192	0.164	0.464**	0.454*	1.00

Notes: * Correlation is significant at < 0.05 level (2-tailed)/**Correlation is significant at < 0.01 level (2-tailed).

Legends:

[1]Morris Rosenberg Self Esteem Scale/[2]Copenhagen Burnout Inventory/[3]Job Satisfaction Survey/PB: Personal Burnout/WRB: Work Related Burnout/CRB: Client Related Burnout/ Pay: Payment/Pro: Promotion/Sup: Supervision/Fringe: Fringe benefits/Cont: Contingent Reward/Oper: Operating Rewards/Co.: Co-workers/N.W.: Nature of Work/Com: Communication.

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psychiatric nursing staff as previous literature had suggested that psychiatric nurses are at higher risk to develop the burnout syndrome (Fagin et al. 1996, 2008; Snelgrove 1998; Sullivan 1993; Thomsen et al. 2001).

Methodological Issues

The present study has a high degree of methodological soundness than similar studies done previously. A stringent purposive sampling method was employed in this study to select the study samples. In the present study only those nurses were included who have been working these two institutes (CIP and RIMS, Ranchi), uninterrupted, for five years or more. Previous studies have taken samples without considering the duration of service and have used 'convenient sampling' while selecting samples (Fagin et al. 1996; Kipping 2000). 'Length of service' is an important factor for both job satisfaction and burnout because in most cases burnout and dissatisfaction appear among the more experienced workers compared to newer workers. These two groups were comparable to each other as no significant difference could be found between them with regards to age, education, domicile, marital status, native state, mother tongue and some occupation related parameters (for example, travelling time from place of residence to hospital, number of problems with staff in the last one year, etc.).

Standardized instruments were used to assess self-esteem, job satisfaction and burnout of the subjects of either group. To measure self esteem of both the groups of nurses (psychiatric nurses (study group) and general nurses (control group)) the well-accepted Morris Rosenberg Self-esteem Scale was used. Another widely accepted tool, Paul E. Spector's Job Satisfaction Survey Scale was used to measure the job satisfaction among both the groups of nurses. Spector's Job Satisfaction Survey Scale (JSS) has some added advantages over other instruments used for such studies, for example, 'Index of Work Satisfaction (IWS)' (Burnard et al. 1999). Spector's Job Satisfaction Survey Scale is a combination of nine components—payment, promotion, supervision, fringe benefits, contingent rewards, operating conditions, co-workers, nature of work and communication, and covers wider areas of the occupational repertoire than the IWS (Burnard et al. 1999). The JSS is a multidimensional instrument that was originally developed for measuring the job satisfaction level of the professionals and staffs engaged in social service sector. But Spector (1985) later mentioned that this scale can also be used in other sectors. The range of test–retest score of the JSS was 0.80–0.64 and the convergent validity was 0.76 (Van Saane et al. 2003). Recently Fesharaki et al. (2012) validated this scale on 301 military health care workers in Iran. At the end of the study they enumerated the reliability of the questionnaire as 0.86 in Cronbach's Alpha (α). They concluded that the JSS is a valid and reliable questionnaire for measuring job satisfaction among military health care workers.

The Rosenberg Self-Esteem Scale (RSES) is a widely used and the most reputed instrument for measuring self-esteem. This scale has been tested for reliability and validity in many settings. In Canada Bagley et al (1997) validated the Rosenberg Self-Esteem Scale (RSES) on more than 2100 high school students. These authors also found the RSES as a reliable and valid tool for measuring self-esteem. The RSES was devised as a unitary scale, and this scale has consistently been having alpha values in excess of 0.85 (Bagley et al. 1997).

The Copenhagen Burnout Inventory (CBI) was applied on the nurses to measure job burnout, which is also a valid tool to measure the burnout phenomenon. Previous research has so far not addressed the

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combined comparison of self-esteem, job satisfaction and burnout within and between the two groups, that is psychiatric and general nurses. So this study fills an important void in the literature in this regard.

Findings of the Study

This study included only female nurses. Female nurses outnumber their male counterparts in India at the present time. Only middle-aged nurses who had spent at least five years in their jobs were considered for the study as those new to the job and those nearing retirement would not have given a true picture regarding job satisfaction and burnout. Middle-aged nursing professionals were selected with the rationale that they have to bear greater responsibilities at work and remain mostly occupied. In a cross-cultural study on nurses (Lambert et al. 2004), where subjects were recruited into the study in Japan ($n = 310$), South Korea ($n = 449$), Thailand ($n = 297$) and Hawaii Islands (USA) ($n = 498$), the mean age of the subjects was either lower or higher than the mean age of subjects in the present study, which was 37.10 years. In the Lambert et al. (2004) study, the mean ages of nurses in the above mentioned four locations were 39.4, 30.2, 43.1 and 40.1 years respectively.

In the present study it was found that the general nursing staff (control group) experienced more burnout in all the three domains of the burnout scale (CBI), that is, 'personal burnout', 'work-related burnout' and 'client-related burnout' than the psychiatric nursing staff (experimental group). This finding is novel in the sense that most of the previous studies reported that psychiatric nurses possess a higher risk for developing burnout syndrome and becoming dissatisfied with their jobs (Chen and McMurray 2001; Fagin et al. 1996, 2008; Hirohisa et al. 2006). Research has shown that psychiatric nurses have greater chances of developing burnout, low self-esteem and dissatisfaction about their job because of several factors such as: 'refractoriness of psychiatric illness' and 'stigma of mental illness (Dickinson and Wright 2008)', 'high work-load leading to cognitive loading (Radcliffe, 2000)', 'presence of psychopathology and behavioural abnormalities in patients, e.g., high degree of aggressiveness, suicidality, persecution', 'the inequity in the exchange process between nurses and patients, and the unrealistic expectations of nurses of the patients' potential for rehabilitation (Melchior et al. 2003). A likely explanation of the high level of burnout among general nurses in the present study is the fact that the selected psychiatric nurses were working in a central government (Government of India) run tertiary mental hospital and they receive higher pay packages and other benefits than the general nurses who work in a provincial government (Government of the State of Jharkhand) run hospital where the pay and other benefits are much less. Other responsible factors might be greater work pressure, pressure from the patients (RIMS happens to be the main public sector referral hospital of the state of Jharkhand), job instability, less nurse–patient ratio, higher intrusion of administration in the core area of nurses, grievances of caregivers and pressures from outside agencies, for example, political groups and local influential person/s, etc. It could be presumed that the cumulative impact of all these aforesaid stressors cause higher burnout and less job satisfaction among general nurses working in RIMS, which happens to be a referral multispecialty hospital and medical college of the state. Additionally the sphere of RIMS is much wider than the CIP, because CIP deals with only psychiatric disorders and the administration–nursing staff relationship somehow works as a mediating factor in lessening work-related

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stress and burnout. Barring a few sporadic or separate incidents in CIP this relationship is warmer than general hospitals.

Relationship among Self-esteem, Job Satisfaction and Burnout of Psychiatric Nurses

The present study found that there was a significant positive correlation between self-esteem and payment/salary in the 'experimental group' (psychiatric nurses). Similar findings have also been reported in numerous previous studies (Carson et al. 1997; Fagin et al. 2008; Hatcher and Laschinger, 1996; Melchior et al. 1997). Two areas of burnout—'personal burnout' and 'work-related burnout' have a very significant positive correlation with each other—which means personal burnout level would escalate if 'work-related burnout level goes up' and vice-versa. Maslach et al. (2001) also observed that individuals who possesses personality characteristics like 'sense of exhaustion', 'cynicism' and 'detachment from other co-workers' are more prone to develop occupational burnout. Hence the findings of this study are consistent with these previous studies mentioned above.

Relationship among Self-esteem, Job Satisfaction and Burnout of General Nurses

A significant positive correlation was noted in the general nurses' group between self-esteem with some of the areas of 'Job Satisfaction Scale', for example, 'payment', 'promotion', 'fringe benefits', 'contingent rewards' and 'overall job satisfaction score'. At the same time, significant positive correlations were noted between job satisfaction areas like payment, promotion, supervision, fringe benefits, contingent rewards, nature of work, communication and significant negative correlation with areas of burnout, for example, personal burnout, work-related burnout, client-related burnout and overall burnout. Significant negative correlations were noted between burnout and self-esteem as well as job satisfaction. Previously Moore et al. (1997) conducted a survey of 253 home health care nurses' perceptions of work-related stress, self-esteem, social intimacy, and job satisfaction and found that stress has a negative correlation with self-esteem, social intimacy and job satisfaction. A positive correlation, however, was found between self-esteem and social intimacy and job satisfaction. Nurses with five years or more in their home health nursing position had significantly higher levels of self-esteem. Other authors like Pines and Maslach (1977), Corrigan et al. (1995), Farrington (1997), Melchoir et al. (1997) and Kilfedder et al. (2001) also showed that factors like job satisfaction has statistically significant correlation with burnout syndrome. This way the current study has been consistent with previous study findings.

Conclusion

Human service professionals who are in social services, education, criminal justice and health services are particularly vulnerable to burnout largely because of changeable interpersonal interactions and multidimensional organizational factors. Globally the numbers of trained and skilled nurses are not at par with the numbers of patients. So there is an urgent need to prevent the emergence of burnout syndrome among nurses because if this is not addressed in a timely fashion, then skilled professionals would

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become demotivated to serve their patients. So there is a need to create a healthy work environment for nurses to maintain an adequately dedicated and motivated nursing workforce.

It was observed in the present study that psychiatric nurses had a higher level of self-esteem than general nurses and the general nurses had a higher level of burnout and lower job satisfaction than psychiatric nurses. But at the same time it must be kept in mind that this study has some inherent limitations, for example, small sample size in either group, cross-sectional single-time assessment and the use of subjective instruments for data collection which could have either underestimated or overestimated information related to self-esteem, job satisfaction and burnout.

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7. Analysis of the mediating role of self-efficacy and self-esteem on the effect of workload on Burnout's influence on nurses' plans to work longer

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Analysis of the Mediating Role of Self-Efficacy and Self-Esteem on the Effect of Workload on Burnout's Influence on Nurses' Plans to Work Longer

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At the present time, we know that there is a positive relationship between self-efficacy and self-esteem in which positive beliefs about one's own efficacy increase one's sense of self-worth as stressful situations of a heavy workload are coped with successfully, and this, in turn, affects the nurses' plans to work longer. Analyze the mediating role of self-efficacy and self-esteem in the effect of workload, measured as the number of users attended to during a workday, on burnout in nursing professionals. A sample of 1307 nurses aged 22 to 60 years who were administered the *Brief Burnout Questionnaire*, the *General Self-Efficacy Scale*, and the *Rosenberg Self-Esteem Scale*, and workload, measured as the number of users attended to during the workday. The results show that professionals with high levels of self-efficacy also scored higher on global self-esteem. Burnout correlated negatively with both variables (self-efficacy and self-esteem). Three clusters were found with the variables (self-efficacy, self-esteem, and workload) showing significant differences in burnout scores among clusters. Self-efficacy and self-esteem function as buffers of the negative effects of workload on burnout. Organizations should design interventions for promoting the personal resources of their workers through training activities and organizational resources (e.g., redesigning job positions) to promote satisfaction and wellbeing of employees, making their stay at work greater.

Keywords: self-efficacy, self-esteem, workload, burnout – professional, psychology, mediating model

INTRODUCTION

The World Health Organization [WHO] considers burnout, which has also been analyzed in education (Martos et al., 2018; Vizoso-Gómez and Arias-Gundín, 2018), an occupational illness of special relevance (World Health Organization [WHO], 2016). This syndrome is characterized by gradual physical and mental exhaustion of individuals, feelings of detachment and of negative attitudes toward their job, and perception of diminished professional efficacy (Maslach et al., 2001).

Even though workers in different occupational sectors may suffer from this syndrome, there is a stronger risk for healthcare professionals, because permanent contact with the suffering and illnesses of others makes their work setting particularly emotionally and psychologically stressful (Adriaenssens et al., 2015; Hunsaker et al., 2015; Banerjee et al., 2016). We can't forget that

this syndrome is also present in other sectors, such as in Alzheimer's Patient Family Caregivers with no Specialized Training (Pérez-Fuentes et al., 2017). Therefore, the importance of its study stems from the negative consequences it has for the health of workers and the organization. For example, it has been demonstrated that burnout is related to a diversity of physical illnesses (musculoskeletal, cardiovascular, gastrointestinal, respiratory infections, etc.) (Jaworek et al., 2010; Kim et al., 2011) and psychological problems (mood, depression and anxiety disorders, etc.) (Bianchi et al., 2015; Maslach and Leiter, 2016), negatively affecting job performance and leading to absenteeism (Schaufeli et al., 2009; Bakker and Demerouti, 2014).

One of the theoretical models of reference in research on wellbeing and job stress is the *Job Demands-Resources Model* (JD-R), developed by Demerouti et al. (2001), to provide an understanding of burnout and other psychological processes that take place in organizations. Among other matters, this model identifies the job demands that are the best predictors of burnout though a process of deterioration of an employee's health, which can trigger psychosocial distress, absenteeism and lack of worker commitment to the organization (LePine et al., 2005; Bakker et al., 2014; Bakker and Demeouti, 2017). The job demands which have received the most attention in the literature are related to tasks and functions in job positions, especially workload (Garcia-Izquierdo and Rios-Risquez, 2012; Cooper et al., 2016; Kandelman et al., 2017; Purohit and Vasava, 2017). Workload may be understood from its quantitative perspective, referring to the perception of an excess volume of work with regard to the time available for it, and its qualitative dimension, which alludes to the quality and complexity of work to be done (French et al., 1982). Kalisch and Lee (2014), for example, found that workload, referring to the number of patients attended to in a workday, was related to dissatisfaction of nursing professionals. Meanwhile, Van Bogaert et al. (2017) found that factors related to daily work routines influenced the perception of workload of nursing employees, especially, the large number of patients and severity of illnesses. Nevertheless, these authors suggested that the negative perception of workload is not exclusively determined by the volume of work, but also by the feelings of frustration generated by not being able to attend adequately to the needs of patients or offer them quality service.

In addition, in a recent extension of the original JD-R model, workers' personal resources were included to complete the structure of the Work Resources and Demands Model (Xanthopoulou et al., 2007). From this perspective, positive self-evaluations or beliefs workers have about their control over their setting can buffer the negative impact of work demands and at the same time, relate positively to engagement and job performance (Bakker and Demeoruti, 2017). Among these beliefs, self-efficacy and worth, which have been widely studied in Organizational Psychology because of their involvement in wellbeing and occupational health, are emphasized (Ventura et al., 2015; Alharbi et al., 2016; Barbaranelli et al., 2018).

Self-efficacy is a "belief" that individuals have about their capacity to control their surroundings and influences the way they behave, think and feel about future events (Bandura, 1977, 1997). In this sense, workers' beliefs about their self-efficacy are essential to how they perceive the context in which they work, especially when they have to cope with very demanding and potentially stressful job demands (Grau et al., 2012; Ventura et al., 2015). In such cases, the employees with positive beliefs about their self-efficacy respond adaptively to job stressors, predicting positive states of spiraling gains (e.g., engagement) (Ventura et al., 2006; Lorente et al., 2014; Pérez-Fuentes et al., 2018). On the contrary, those workers who consider themselves ineffective, will attribute failures to a deficit in their competence, increasing their feeling of inefficacy (Van Wingerden et al., 2017).

Self-esteem is the global positive or negative evaluation a person has of their self-worth (Rosenberg, 1965). High levels of self-esteem have been related to wellbeing, satisfaction (Orth et al., 2012; Extremera and Rey, 2018) and effective management of stress and coping with conflictive situations (Bajaj et al., 2016; Yildirim et al., 2017).

There is also considerable attention to the study of self-esteem due to its significant repercussions in the school (Pérez-Fuentes and Gázquez, 2010; González-Cabanach et al., 2017) and at work (Bakker et al., 2014; Lin et al., 2018), and more specifically, with regard to the burnout syndrome (Molero et al., 2018a,b).

Finally, we start from the following hypothesis, that some studies have shown that there is a positive relationship between self-efficacy and self-esteem (Maggiori et al., 2016), in which positive beliefs about one's efficacy increase the feeling of self-worth as stressful situations are coped with successfully (Caprara et al., 2010, 2013).

Our objective was to analyze the mediating role of self-efficacy and self-esteem on the effect of work load, measured as the number of users attended to in the workday, on burnout in nursing professionals.

MATERIALS AND METHODS

Participants

The original sample consisted of 1601 nurses in Andalusia (Spain) randomly selected from different health centers, of whom those actively employed at the time data were acquired were selected. Cases of random answers or incomplete questionnaires were discarded. Thus the final study sample was composed of a total of 1307 participants. The mean age was 32.03 years (SD = 6.53) in a range of 22 to 60. Of the total sample, 84.5% (n = 1104) were women and 15.5% (n = 203) men, with a mean age of 32.03 (SD = 6.50) and 32.01 (SD = 6.71), respectively. As for their employment situation, 67.1% (n = 877) were working at temporary jobs and 32.9% (n = 430) had permanent contracts.

Instruments

An *ad hoc* questionnaire was prepared for sociodemographic data (age, sex), as well as for information on workload, measured as the number of users attended to in a workday.

Cuestionario Breve de Burnout [Brief Burnout Questionnaire]

This consists of 21 items on a five-point Likert-type response scale, which evaluates background, elements and consequences

of the syndrome (Moreno et al., 1997). Its purpose is an overall evaluation of burnout as well as its background and consequences, in the three blocks the questionnaire is organized in. In the study subject of this paper, the block made up of the three syndrome factors in the Maslach and Jackson model (1981) was used. Instrument reliability for the study sample, specifically, for global burnout, was $\alpha = 0.78$.

General Self-Efficacy Scale

This scale consists of 10 items with a four-point Likert-type format that evaluate a person's perception of their own competence for managing different stressful situations effectively (Baessler and Schwarcer, 1996). Sanjuán et al. (2000), analyzed the reliability of the scale, finding a Cronbach's alpha of 0.87. In our case, the calculation of internal consistency of the scale found an alpha of 0.92.

Rosenberg Self-Esteem Scale

This was developed for evaluating self-esteem in adolescents (Rosenberg, 1965). It is made up of 10 items whose contents concentrate on feelings of respect and acceptance of oneself. The response is rated on a four-point Likert scale (from 1 = Strongly agree to 4 = Strongly disagree). Other studies have demonstrated its adequate psychometric characteristics in both a general population (Atienza et al., 2000) and in more specific populations (Vázquez et al., 2013). In our case internal consistency was $\alpha = 0.86$.

Procedure

Before collecting data, participants were guaranteed compliance with confidentiality and ethical information standards in data processing. The study was approved by the Bioethics Committee of the University of Almería (Spain). Questionnaires were implemented on a Web platform which enabled participants to fill them out online. For control of random or incongruent answers, a series of control questions were inserted and any such cases were discarded from the study sample.

Data Analysis

First, to explore the relationships between variables, correlation analyses were done for the continuous quantitative variables. A two-stage cluster analysis was also carried out to group participants by self-esteem as a categorical variable (low, medium and high), and other continuous quantitative variables, such as general self-efficacy and the number of users attended to per workday. Once the clusters or groups had been identified, an ANOVA was done to determine the existence of significant differences between groups with respect to burnout as the dependent variable. To determine which groups were significantly different from each other, the *post hoc* Scheffé comparison test was applied. The SPSS statistical software version 23.0 for Windows was used for these analyses.

Finally, a multiple mediation analysis was done with two mediator variables forming a causal chain to compare the mediating effect of the perceived Self-efficacy and Self-esteem variables. The Preacher and Hayes (2008) SPSS macro for mediation effects was used to compute the mediation model. Bootstrapping was applied with coefficients estimated from 5000 bootstraps to test the indirect effect.

RESULTS

Burnout in Nursing and Its Relationship With Perceived Self-Efficacy, Self-Esteem, and Workload

Table 1 presents the descriptive statistics of each of the variables of the study and bivariate correlations. The correlation coefficients found reveal that professionals with high levels of self-efficacy also showed higher scores on global self-esteem ($r = 0.53$; $p < 0.001$). Moreover, burnout correlated negatively with both variables (self-efficacy: $r = -0.19$; $p < 0.001$ and self-esteem: $r = -0.28$; $p < 0.001$).

A cluster analysis was done to form the groups entering the following variables: self-esteem (low, medium, and high), perceived self-efficacy, and workload. Three groups resulted from this analysis (**Figure 1**), distributed as follows: 43.2% ($n = 563$) of the participants pertained to Cluster 1, 35.9% ($n = 468$) to Cluster 2, and the remaining 20.9% were in Cluster 3 ($n = 272$).

The first group (Cluster 1) was characterized by low self-esteem and means slightly below the mean of the total sample on perceived self-efficacy ($M = 29.27$) and number of users attended to ($M = 20$).

The second group (Cluster 2) included nursing professionals with a medium level of self-esteem who scored near the mean in perceived self-efficacy ($M = 31.85$), and a slightly higher mean ($M = 21.75$) in workload than the total sample.

The third group (Cluster 3) identified professionals who had high self-esteem, medium scores in perceived self-efficacy ($M = 35.04$) and were above the mean of the total sample. In this group, the mean users attended to per workday was similar to the mean for the sample ($M = 20.93$).

TABLE 1 | Burnout, perceived self-efficacy, self-esteem, and workload.

	1	2	3	4	*M*	*SD*	*Skewness*	*Kurtosis*
1. Burnout	–				55.42	7.49	0.632	1.473
2. Perceived self-efficacy	−0.19***	–			31.40	4.57	−0.128	0.842
3. Self-esteem	−0.28***	0.53***	–		26.10	3.75	−0.370	−0.039
4. Workload[a]	0.13***	0.07**	0.03	–	20.82	17.28	1.425	2.193

Correlations and descriptive statistics (N = 1307). [a]*Number of users attended to in a workday;* $^{**}p < 0.01$; $^{***}p < 0.001$.

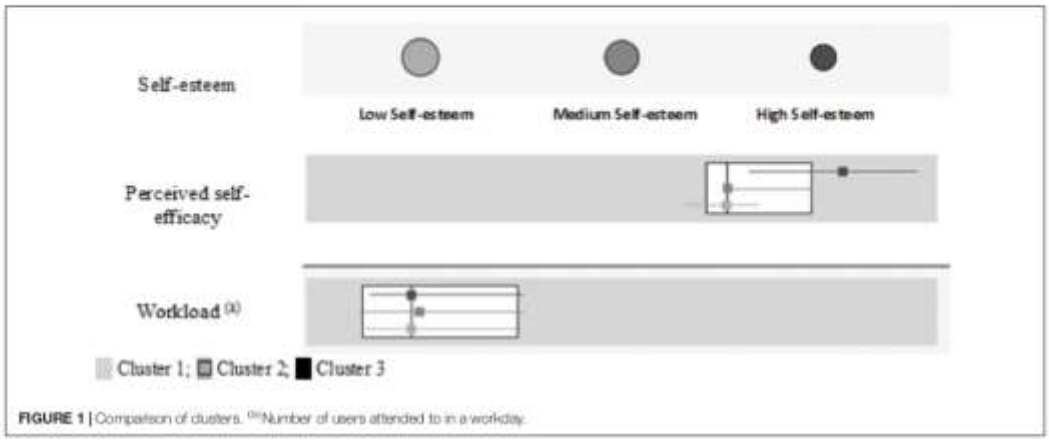

FIGURE 1 | Comparison of clusters. (a)Number of users attended to in a workday.

TABLE 2 | Differences in burnout between groups (clusters).

	Cluster	*N*	*Mean*	*SD*	ANOVA		Difference in means
					F	Sig.	
Burnout	1	563	57.14	7.18	38.94	0.000	|c1−c2|***|c2−c3|***|c1−c3|***
	2	488	55.09	7.49			
	3	272	52.43	7.16			

Descriptive, ANOVA, and post hoc; ***$p < 0.001$.

After classification in groups, based on the three-cluster solution, an ANOVA was performed to find out whether there were any differences in the clusters with respect to burnout. The Scheffé test was used for *post hoc* comparisons.

As observed in **Table 2**, there were significant differences between clusters [$F_{(2,1304)} = 38.94$; $p < 0.001$; $\eta_p^2 = 0.05$] for burnout scores. Cluster 1 is where the mean score on burnout was highest ($M = 57.14$; $SD = 7.18$), followed by Cluster 2 ($M = 55.09$; $SD = 7.49$) and, finally with the lowest mean score in burnout, Cluster 3 ($M = 52.43$; $SD = 7.16$). *Post hoc* analyses showed that the differences found among the three groups were statistically significant.

Multiple Mediation Model for Estimating Predictors and Paths of Indirect Effects of Perceived Self-Esteem and Self-Esteem on Burnout

Considering workload as the independent variable (X), and self-efficacy and self-esteem as mediating variables (M_1: SELF-EFFICACY and M_2: SELF-ESTEEM), the multiple mediation model was computed with burnout as the dependent variable (Y).

Figure 2 shows the multiple mediation model for burnout including direct, indirect and full effects.

In the first place, there was a statistically significant effect [a_1: $B = 0.02$, $p < 0.01$] of workload (X) on perceived self-efficacy (M_1). The second regression analysis took the second mediator (M_2) as the result variable, and included the workload (X) and perceived self-efficacy (M_1) variables in the equation. There was a significant effect of self-efficacy [d_{21}: $B = 0.43$, $p < 0.001$] on self-esteem (M_2), but the same was not true of self-esteem [a_2: $B = 0.00$, $p = 0.74$].

In the third regression analysis, the effect of the independent variable and the two mediators was estimated taking burnout (Y) as the result variable. In all cases, significant effects were observed: workload [c': $B = 0.05$, $p < 0.001$], perceived self-efficacy [b_1: $B = -0.12$, $p < 0.05$], and self-esteem [b_2: $B = -0.50$, $p < 0.001$]. The total effect of workload on burnout was significant [c: $B = 0.06$ $p < 0.001$].

Finally, the indirect effects were analyzed by bootstrapping, finding data supporting a significant level for Path 1 [ind_1: $X \rightarrow M_1 \rightarrow Y$; $B = -0.002$, $SE = 0.001$, 95% CI (-0.007, -0.000)] and Path 2 [ind_2: $X \rightarrow M_1 \rightarrow M_2 \rightarrow Y$; $B = -0.004$, $SE = 0.001$, 95% CI (-0.008, -0.001)]. However, the data did not support significance for Path 3 [ind_3: $X \rightarrow M_2 \rightarrow Y$; $B = -0.000$, $SE = 0.002$, 95% CI (-0.007, 0.004)].

DISCUSSION

Nursing professionals care for a large volume of patients during their workday, sometimes with an imbalance between time available to attend to their needs adequately and the workload.

better understanding of the phenomenon. It would likewise be of interest to perform multi-level studies on burnout by the area where the nursing professionals work, so organizational preventive measures can be implemented.

CONCLUSION

The main objective of this study was to evaluate the mediating role of psychological variables on the effect of workload on burnout in nursing professionals. It revealed that workload has a significant positive relationship with burnout, while self-efficacy and self-esteem act as protective variables. It was also demonstrated that workload has an indirect effect on self-esteem, mediated by beliefs about self-efficacy, and that the joint effect of self-efficacy and self-esteem can buffer the negative effect of workload on burnout. In view of all of the above, a line of research is now starting in which the analysis of the complex relationships established between the different variables and the effects of their combination, beyond the impact of isolated variables on burnout, is prioritized.

ETHICS STATEMENT

This study was carried out in accordance with the recommendations of 'Bioethics Committee of the University of Almeria (Spain),' with written informed consent from all subjects. All subjects gave written informed consent in accordance with the Declaration of Helsinki. The protocol was approved by the Bioethics Committee of the University of Almeria (Spain).

AUTHOR CONTRIBUTIONS

MM and MPF contributed to bibliographic review, article writing, and data analysis. All authors contributed to researchers of the project to which the article data belong.

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8. ***Burnout in health professionals according to their self-esteem, social support and empathy profile.***

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Burnout in Health Professionals According to Their Self-Esteem, Social Support and Empathy Profile

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Introduction: Professionals in the healthcare field are in situations that could be a source of stress and sometimes develop burnout syndrome. Self-esteem, social support, and empathy are variables which intervene and influence the appearance of this syndrome.

Objective: Identify healthcare professional profiles based on self-esteem, empathy and perceived social support, and analyze the extent to which these profiles show differences in developing burnout.

Method: The sample was made up of 719 healthcare professionals with a mean of 38.52 years of age. The Short Questionnaire of Burnout, the Rosenberg Self-Esteem Scale, the Perceived Social Support Questionnaire and the Basic Empathy Scale were used.

Results: The results of a cluster analysis with self-esteem, empathy, and perceived social support showed four groups/profiles. Two of them, which included professionals with low self-esteem, differed in the rest of the characteristics. Furthermore, significant differences in burnout scores were found among the groups identified.

Conclusion: The results show the need to study burnout with attention to individual and or social characteristics, where self-esteem is shown to be one of the explanatory variables making the main differences among the groups.

Keywords: burnout, professional, empathy, healthcare, self-esteem, social support

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INTRODUCTION

Healthcare professionals are exposed to complicated situations that can generate tension they deal directly with persons who suffer from health problems and their families (Fernández-Guzmán et al., 2012). These situations can lead to increased stress and what is known as the burnout syndrome. The number of studies related to this syndrome has grown, because one of the groups where it is most prevalent is healthcare personnel (Navarro et al., 2015).

The burnout syndrome is a psychological and emotional affection associated with work which generates high distress and absenteeism in individuals (Gil-Monte, 2007). At the present time there is no single definition of burnout, although there is a consensus about this syndrome as a response to chronic job stress, which is characterized by the appearance of cognitive impairment, affective wear and negative attitudes and behaviors (Ávila Toscano et al., 2010; Casa et al., 2012). Similarly, emotional exhaustion, depersonalization, and lack of personal accomplishment also contribute to this syndrome (Salillas, 2017).

Burnout is related to sociodemographic variables, such as gender, age or years of professional experience, and so forth (Betancur et al., 2012). With regard to gender, some authors underline its higher prevalence in women than in men (Ballester-Arnal et al., 2016), while others show higher levels of burnout in men than in women (Pera and Serra-Prat, 2002), and finally, Peralta-Ayala and Moya (2017) did not find any gender differences in burnout.

The figures found in research done in recent years on subjects related to burnout differ. This is because the prevalence of burnout is hard to determine, since it depends on the cutoff scores of the scale and/or questionnaire used, as well as the criteria used in each country (Ávila Toscano et al., 2010). For example, the study by Embriaco et al. (2012) found that individuals with depression symptoms showed higher levels of burnout.

Studies determining the prevalence of burnout (Núñez et al., 2010; Barragán et al., 2015) have not only related it with demographic variables, but also with other constructs, such as coping, self-esteem, social identity, social support, empathy, and communication skills. It should be mentioned in this regard that adequate development of communication skills in healthcare professionals acts as a protective factor against the burnout syndrome (García et al., 2013; Leal-Costa et al., 2015).

Similarly, self-efficacy and self-esteem as personal variables are also protectors against the appearance of burnout (Vázquez-Ortiz et al., 2012; Fincka et al., 2018). Both self-esteem and self-efficacy affect the way individuals develop attitudes about themselves, which impacts on their professional development (López et al., 2015). In the relationship of burnout and self-esteem, it has been observed that a lack of personal accomplishment leads to low self-esteem and job demotivation (Sánchez, 2014).

Social identity has a transcendental role in the study of burnout syndrome as a variable which influences both the appearance of social support and assessment of stressful situations (Topa-Cantisano and Morales-Domínguez, 2007). Thus, perceived social support has a mediating role in the response to job stress, but in this case, does so as an organizational protective factor (Topa et al., 2005; Pérez-Fuentes et al., 2014).

Additionally, empathy is a social skill fundamental in developing prosocial behaviors which offer help and favor other persons (Richaud, 2014). Empathy has a cognitive component and another affective one (Hojat et al., 2002), and is a construct composed of four dimensions, adopting perspectives, emotional understanding, empathetic stress, and empathetic joy (López-Pérez et al., 2008). According to a study by Martínez et al. (2015) there is a significant relationship between the dimensions of burnout and the empathy construct. This relationship occurs between emotional exhaustion and empathetic stress on one hand, and between depersonalization and empathetic joy on the other.

From what has been observed up to now, the use of these skills is necessary to be able to manage stress and to manage moods and emotions themselves (Morales, 2017).

Since there are very few studies (Maricutoiu et al., 2017) which show different self-esteem, empathy, and social support profiles of healthcare professionals and the prevalence of burnout in each, the objective posed for this study was, on one hand, to identify the various healthcare professional self-esteem, empathy and perceived social support profiles, and on the other, analyze the extent to which these profiles show differences in burnout.

Based on previous empirical evidence, the following hypotheses were posed: (1) medium/high levels of self-esteem are associated with higher than mean sample empathy and perceived social support, (2) a low level of self-esteem is related to levels below (or similar to) the sample mean in empathy and perceived social support, and (3) there are significant differences in burnout among the groups characterized by medium/high self-esteem and those with low self-esteem.

MATERIALS AND METHODS

Participants

The sample was made up of 719 healthcare professionals. Of these, 11.3% (n = 81) were physicians, 7.2% (n = 52) where physiotherapists, 52% (n = 374) were certified nursing assistants, 6.5% (n = 47) were hospital aides and 22.9% (n = 165) had other healthcare positions.

Participant age was from 20 to 62 with a mean of 38.52 years (SD = 9.45). By gender, 15.7% (n = 113) were men with a mean age of 35.33 (SD = 8.93), while 84.3% were women, with a mean age of 39.12 (SD = 9.44). Participant marital status was 34.8% (n = 250) single, 57.1% (n = 410) stable partner or married, 0.7% (n = 5) widowed, and the rest 4.8% (n = 3) were separated or divorced.

Instruments

An *ad hoc* questionnaire for collecting participant sociodemographic data.

The Short Questionnaire of Burnout (SQB; Moreno et al., 1997) was used to measure burnout. This is a brief instrument for overall evaluation of burnout, as well as syndrome antecedents and consequences. Designed as a questionnaire to supplement the Maslach Burnout Inventory (MBI; Maslach and Jackson, 1986), it consists of 21 items with a five-point Likert-type response scale organized theoretically in three blocks. This study made use of the block of three syndrome factors in the model by Maslach and Jackson (1981). The instrument's reliability for the study sample for the factor evaluating overall burnout was 0.78 (Cronbach's alpha).

The Self-Esteem Scale (Rosenberg, 1965) was designed to evaluate how satisfied one feels with oneself. This instrument consists of 10 general items scored from 1 to 4 on a Likert-type scale, where 1 is "strongly agree" and 4 "strongly disagree." The total score is the result of the sum of the points on the 10 items it consists of, some of which are positive and others are negative, reverse-scored items. The total score on the scale is from 10 to 40 points. Reliability of this study had a Cronbach's alpha of 0.81 for each scale.

The *Cuestionario de Apoyo Social Percibido* [Perceived Social Support Questionnaire] (CASPE; Calvo and Díaz-Palarea, 2004) consists of nine items which determine whether the subject has a partner and the quality of their relationship (in one item), the relationship with the family in terms of number of contacts and subjective perception of them (in three items), friendships (using

four items) and participation in social and cultural organizations (using one item). Items 1–7 are rated on a Likert-type scale with four choices, Item 9 with five choices and one item is answered yes/no. Scoring is done by assigning each item the numerical value of the choice answered (for a possible score of 9 to 35), so that the higher the score, the more perceived social support there is. The Cronbach's alpha calculated for the instrument from our study sample data was 0.84.

Basic Empathy Scale (BES; Jolliffe and Farrington, 2006). The adaptation by Oliva et al. (2011) was used. It consists of nine items which are distributed in two scales corresponding to Affective Empathy and Cognitive Empathy. These items are answered on a five-point Likert-type scale where 1 = Completely disagree and 5 = Completely agree. Instrument reliability found for the study sample had a Cronbach's alpha of 0.90 for the affective empathy scale and 0.91 for cognitive empathy.

Procedure

Participation in this study was voluntary and all the participants who filled in the questionnaire were informed of its objectives and how to fill it in. They were also informed that their answers would be completely anonymous and data processing confidential. The questionnaire was filled in online individually during the months of November 2016 to March 2017. Control questions were included to avoid random answers, and all the participants gave their informed consent to ensure that ethics of research were complied with. Similarly, it should be mentioned that this study was approved by the University of Almeria Bioethics Committee.

Data Analysis

SPSS v23 statistical software was used for data analysis. First a two-step cluster analysis was done to establish the groups of participants based on self-esteem as a categorical variable (low, medium, and high), and other continuous quantitative variables, such as general self-efficacy, empathy (cognitive and affective) and perceived social support.

When the groups or clusters had been identified, an ANOVA was done to determine any significant differences between the groups with respect to burnout as a dependent variable. The Scheffé test for *post hoc* comparisons was used to determine significant differences between means. And the descriptive parameters were found by frequency analysis.

RESULTS

A cluster analysis with the following variables was done to form the groups: self-esteem (low, medium, high), cognitive/affective empathy and perceived social support. The four groups resulting

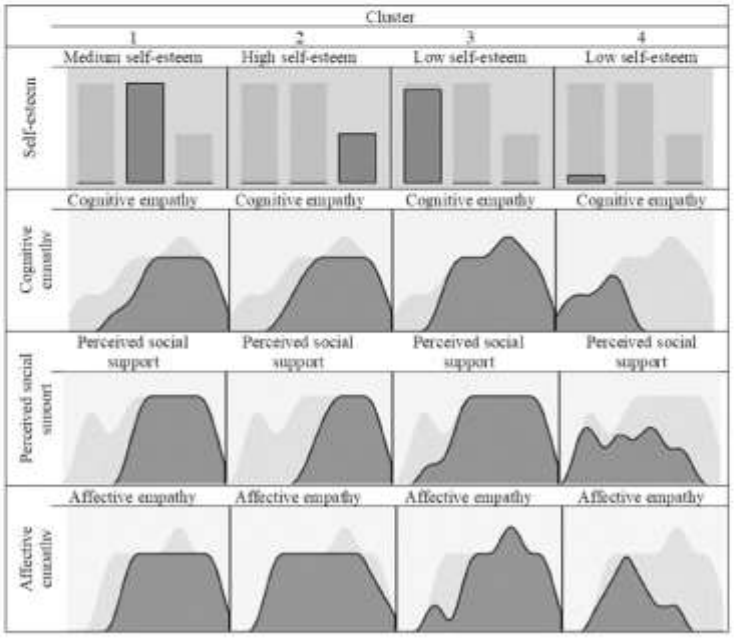

FIGURE 1 | Cluster composition.

TABLE 1 | Frequency/ means scores for the total sample and clusters.

	Total sample (N = 719)	Cluster			
		1 (n = 282)	2 (n = 139)	3 (n = 262)	4 (n = 20)
Low self-esteem	41.3%	–	–	100%	95%
Medium self-esteem	39.4%	100%	–	–	5%
High self-esteem	19.3%	–	100%	–	–
Cognitive empathy	*M* = 19.59 (*SD* = 3.33)	*M* = 20.80 (*SD* = 2.60)	*M* = 20.29 (*SD* = 2.94)	*M* = 19.60 (*SD* = 2.53)	*M* = 7.60 (*SD* = 3.10)
Affective empathy	*M* = 14.54 (*SD* = 3.40)	*M* = 14.76 (*SD* = 3.40)	*M* = 14.53 (*SD* = 3.38)	*M* = 14.94 (*SD* = 2.68)	*M* = 6.35 (*SD* = 3.34)
Perceived social support	*M* = 24.20 (*SD* = 3.55)	*M* = 24.67 (*SD* = 2.79)	*M* = 25.95 (*SD* = 2.66)	*M* = 23.45 (*SD* = 3.17)	*M* = 15.20 (*SD* = 6.47)

TABLE 2 | Means and standard deviations found by groups (Cluster) in burnout, ANOVA and *post hoc*.

	Cluster	*N*	Mean	*SD*	ANOVA		Difference in means
					F	Significance	
Burnout	c1	282	52.59	7.20			
	c2	139	51.54	6.91			|c1-c2||c2-c3|***|c3-c4|
	c3	262	56.00	7.98	12.17	0.000	|c1-c3|***|c2-c4||c1-c4|
	c4	20	56.38	23.39			

***$p < 0.001$.

from these variables (**Figure 1**) were distributed as follows: 40.1% ($n = 282$) of the participants were in Cluster 1, 19.8% ($n = 139$) in Cluster 2, 37.3% in Cluster 3 ($n = 262$), and the remaining 2.8% ($n = 20$) were in Cluster 4.

As shown in **Table 1**, the first group resulting from the cluster analysis (Cluster 1) was characterized by 100% medium self-esteem and means slightly above those for the total sample in the empathy and social support variables. The specific mean scores in Cluster 1 on each of the variables were cognitive empathy ($M = 20.08$), affective empathy ($M = 14.76$), and perceived social support ($M = 24.76$). Means for the total study sample ($n = 719$) were cognitive empathy ($M = 19.59$), affective empathy ($M = 14.54$), and perceived social support ($M = 24.20$).

The second group (Cluster 2) identified healthcare professionals with high self-esteem (100%), with scores on the cognitive empathy and social support variables above the mean for the total sample, and similar scores on affective empathy. Specifically, mean Cluster 2 scores were ($M = 20.29$) on cognitive empathy ($M = 14.53$) on affective empathy and ($M = 25.95$) on perceived social support.

The third and fourth groups (Clusters 3 and 4) contain the professionals with low self-esteem (100 and 95%, respectively). These two groups are differentiated by their scores on the rest of the variables analyzed. Although their scores were both lower than the total sample in most cases, in Cluster 4, the mean scores were lower than all the rest of the groups and also the total sample: cognitive empathy ($M = 7.60$), affective empathy ($M = 6.35$) and perceived social support ($M = 15.20$). The group of professionals in Cluster 3 had scores on cognitive empathy ($M = 19.60$) and social support ($M = 23.45$) below the mean of the total sample, while for affective empathy ($M = 14.94$) the mean was slightly higher.

The table below summarizes the frequency (low, medium, and high self-esteem) and mean scores (cognitive/affective empathy and perceived social support) of the variables analyzed for the total sample and each of the clusters.

After classifying the groups based on the three-cluster solution, an ANOVA was done to find out the differences in burnout between the clusters followed by the Scheffé test for *post hoc* comparisons.

As observed in **Table 2**, there were significant differences between the clusters ($F_{(3,699)} = 12.17$; $p < 0.001$; $\eta_p^2 = 0.05$) in burnout scores. The highest mean score in burnout was in Cluster 4 ($M = 56.38$; $SD = 23.39$). However, the *post hoc* comparisons revealed that it is Cluster 3 ($M = 56$; $SD = 7.98$) which shows significant differences in burnout which turns out to be higher than Cluster 2 ($M = 51.54$; $SD = 6.91$) and also Cluster 1 ($M = 52.59$; $SD = 7.20$).

DISCUSSION AND CONCLUSION

The healthcare field has been found to be conducive to development of the burnout syndrome due to their relations with patients and their families (Fernández-Guzmán et al., 2012). Different healthcare professional profiles have been identified according to their self-esteem, empathy, and social support. Cluster analysis showed the formation of four groups based on self-esteem (low, medium, high), cognitive/affective empathy and perceived social support. The first group showed medium scores in all the variables compared to the total sample. The second group showed high self-esteem, high scores in cognitive empathy and social support and medium scores in affective empathy with respect to the total sample. These results coincide with the study by López et al. (2015) showing that self-esteem affects the attitudes of individuals and their professional performance.

Moreover, the third and fourth groups showed low self-esteem, and were differentiated by their scores on the rest of the variables. In Group 3, the scores were higher with respect to the total sample in cognitive empathy, affective empathy, and social support. Group 4, however, had mean scores lower than the rest of the groups and the total sample. In other words, these two profiles share the same self-esteem characteristic, but differentiate in the rest of the variables. Where Group 4 scored low scores, just as in self-esteem, in Group 3 these variables had high mean scores, and on the contrary, low self-esteem. These results may be due to the number of persons in this profile, since it is rather small compared to Profile 3. In a study by Sánchez (2014), the lack of personal accomplishment led to low self-esteem and demotivation for work.

In addition, the highest scores in cognitive empathy were in Cluster 1, while Cluster 3 scored above the mean in affective empathy, and finally, Cluster 2 had the highest score in social support. These variables are significantly related to the burnout dimensions (Topa-Cantisano and Morales-Domínguez, 2007; Martínez et al., 2015).

It should be mentioned that there were significant differences in burnout results among the four groups, between Group 3 and Group 2, and between Group 1 and Group 3. That is, there were differences in burnout between the group with low self-esteem (Group 3) and the two groups with medium and high scores in self-esteem. These results attract attention, since while Group 4 also had low self-esteem there were no significant differences with the rest of the groups. This could be due to the number of persons in Group 4, which would be one of the limitations of the study. Therefore, future research should use larger study samples.

Finally, it should also be emphasized that the self-esteem variable is what makes the between-group differences in burnout. Therefore, future studies should also make a regression analysis with the self-esteem variable as the explanatory variable to be able to evaluate its weight in burnout.

AUTHOR CONTRIBUTIONS

MM, MP-F, and AB: bibliographic review, article writing, data analysis. JG, MP-F, and MM: researchers of the project to which the article data belong.

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9. The Burden of Burnout Syndrome in Pediatric Intensive Care Unit and Pediatric Emergency Department: A Multicenter Evaluation. Pediatric Emergency Care.

ORIGINAL ARTICLE

The Burden of Burnout Syndrome in Pediatric Intensive Care Unit and Pediatric Emergency Department
A Multicenter Evaluation

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Objective: The objective of this study was to detect variables associated with burnout syndrome (BS) in pediatric intensive care units (PICUs) and pediatric emergency medicine departments (PEDs) in high-volume centers from different parts of Turkey.

Methods: An observational, cross-sectional multicenter study was performed. The Maslach Burnout Inventory scale was administered to all of health care providers working in PICUs and PEDs. In this study, health care providers were defined as physicians, nurses, and other staff (secretaries, cleaning and patient care staff) working in PICU and PEDs.

Results: A total of 570 participants completed the survey. The major finding of this study was that 76.1% (n = 434) of PICU and PED health care professionals had BS. The most prominent subscale of BS was emotional exhaustion (62.5%). The rate of BS was higher among health care providers working in PEDs compared with PICUs (79.1% vs 73.7%, $P = 0.04$). The frequency of BS according to emotional exhaustion and depersonalization subscales was higher in health care providers of PEDs. The rate of BS was also significantly higher in younger employees, females, those working 51 or more hours totally in a week, those having a low monthly salary, those single or divorced, those without children, those with no childcare at home, those not owning a home, those not doing regular exercise and not having regular breakfast, those with total employment time of less than 1 year, and those not having a car or not having a hobby. In PEDs, when the daily evaluated number of patients was equal to or more than 44 (sensitivity, 88%; specificity, 66%), it predicted the occurrence of BS. In PICUs, when the number of patients cared for by 1 nurse was equal to or more than 3, it predicted the occurrence of BS (sensitivity, 78%; specificity, 62%).

Conclusions: By creating early intervention programs to prevent BS, shortages of health care professionals can be avoided and the costs of health care expenditures related to infections can be decreased.

Key Words: burnout syndrome, pediatric intensive care unit, health care providers

(*Pediatr Emerg Care* 2019;00: 00–00)

The term burnout was first introduced by Herbert Freudenberger in 1974. Burnout was defined by him as the status of exhaustion due to excessive demands and requests on energy, power, and resources.[1] Burnout has been most widely detected among professionals such as doctors, nurses, specialists of social services, teachers, or lawyers. Health care providers are among the most risky occupation groups that might be frequently faced with burnout syndrome (BS).[2] Maslach was the leader of studies considering burnout.[3] To define and detect burnout, Maslach formulated the Maslach Burnout Inventory (MBI), consisting of 22 questions and 3 major subscales. These subscales were emotional exhaustion (EE), depersonalization (D), and decreased personal accomplishment (PA). The Turkish version of the MBI was adapted by Ergin.[4] Emotional exhaustion was defined as emerging fatigue status. It frequently occurs owing to excessive psychological and emotional demands. Emotional exhaustion was defined as the beginning point of burnout, and in addition, it was accepted as the center of burnout. Emotional exhaustion particularly describes the individual stress extension of burnout.[5,6] Depersonalization defines the personal relationship side of BS.[2] Depersonalization was defined as individuals behaving toward the people that they were serving without thinking about their emotions. In such a situation, employees behave toward their institutions or people they are serving in an unfriendly, careless, and cynical attitude. According to Maslach, D was the most problematic subscale among the whole extent of burnout. The third extension of burnout was a feeling of decreased professional accomplishment. This was defined as individuals having a tendency to evaluate themselves in a negative manner. For evaluations regarding oneself as an

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individual, in a situation of BS, individuals feel negativity, think they do not improve the company for which they work, feel that their efforts are not useful, and feel that they do not make a difference in their work environment.

In 1992, a Turkish adaptation study of the MBI was done among doctors and nurses.[4] The major difference of this validation and adaptation study of the MBI to the Turkish version from the original version of the MBI was that the researchers used a 5-point Likert-type scale. This was because in Turkish adaptation studies, regardless of the participants' education levels, participants had difficulty in responding to questioners with a 7-point scale. Therefore, the authors made amendments and decided to use a 5-point scale in the Turkish adaptation study of the MBI. In the Turkish adaptation study, the results of analysis confirmed the all of 3 subdimension of the MBI, which were EE, D, and PA.[4] In addition to that, in 2015, a Turkish adaptation study of the MBI—Educators Survey was performed among 760 classroom teachers working in the center and the districts of Ankara. In this study, the validity and reliability studies of the scale were evaluated. The results showed that the original structure of the scale was preserved.[7]

Signs of BS detected in employees include decreased individual performance, loss of motivation, arriving to work late, frequently requesting medical leave, performing sloppy work, or simply resigning.[8] The effects of BS on hospitalized patient care might be associated with increased frequency of infections, prolonged length of hospital stay, and disruptions in treatments of patients.[8] Interventions to improve negative outcomes of BS have been successfully described.[9] Therefore, early recognition of burnout and the application of interventions are essential to improve the quality of life and quality of care. In this cross-sectional study, we aimed to detect variables associated with BS in pediatric intensive care units (PICUs) and pediatric emergency medicine departments (PEDs) in high-volume centers in different parts of Turkey.

METHODS

Between February 2017 and June 2017, the MBI scale was sent to participating study centers. Health care professionals in participating study centers were reminded monthly and then weekly by e-mail alerts. Ethics committee approval was received. In total, 21 centers, of which 13 were PICUs and 8 were PEDs, were included in the study. The inventory was sent to centers by postal service. In each center, trained researchers applied the inventory to health care providers in the PICU or PED. The MBI was administered to residents and specialists of pediatrics, fellows of PICUs and PEDs, specialists or professors or associated professors of PICUs and PEDs, and nurses, secretaries, and cleaning and patient care staff.

The MBI consisted of 22 questions and 3 major subscales. These subscales were EE, D, and decreased PA. Emotional exhaustion was determined according to points from a total of 9 questions, D was decided according to 5 questions, and decreased PA was evaluated based upon a total of 8 questions.[4] In the Turkish adaptation study, the researchers used a 5-point Likert-type scale. Therefore, in the Turkish version of the MBI, owing to the 5-point Likert scale, the obtained points for each subscale could change based upon EE (0–36), D (0–20), and decreased PA (0–32). In the Turkish adaptation study, the results of factor analysis confirmed the 3-dimensional structure of the MBI. Cronbach α values of the subscales were as follows: EE, 0.83; D, 0.65; and decreased PA, 0.72. The validity of 3 subdimensions of Turkish version MBI was confirmed by statistical analysis. The items grouped under 3 factors were consistent with the original scale.[4] In the 3 subscales, burnout was graded as low, moderate, and high. Grading according to points among these 3 subscales was as follows: for EE, low is less than 11, moderate 12 to 17, and high 18 points or greater; for D, low is less than 5, moderate 6 to 9, and high 10 points or greater; and for PA, low is 26 or greater, moderate 22 to 25, and high 0 to 21 points. Grades of EE and D were increased by increasing points, whereas for PA with decreasing points burnout was increasing. The presence of burnout was defined as subjects who received at least high-grade points according to EE and/or D (EE ≥ 18 and/or D ≥ 10) and/or low-grade points according to PA (0–21).[10–12]

The demographic features that might be potentially associated with burnout were also evaluated. These variables were age, sex, total years of work in PICUs or PEDs, marital status, number of children, if a child was cared for at home or not, working hours, amount of salary, work in nighttime shifts (shift work) or not, hobbies, having breakfast, time to rest, car or home ownership, doing regular exercise, having a holiday during the last 3 months, having regular education programs or multicentered meetings in the work place, and history of chronic medication use (chronic illness). In addition to these, during the study period, the rates of infection in PICUs or PEDs were also collected. To calculate the infection rate, all of the infections (new and old) that were detected during the study period were counted. To calculate the infection rate, the number of patients with infections in PICUs and PEDs during the study period was divided by the total number of patients hospitalized in PICUs and PEDs during the study period, and the result was multiplied by 100.

The presence of burnout was evaluated. All of the responders of questionnaires completed the questions regarding the 3 MBI subdimensions. Therefore, none of the questionnaires were excluded.

STATISTICAL ANALYSES

Descriptive statistics were used to describe survey responses and respondent demographics. The categorical variables were described by means of absolute frequencies (n) and relative (%) ones. A χ^2 independence test was used to examine the association between categorical variables. Fisher exact test was used when the expected frequency in any cell of the table was less than 5. Multiple risk factors might be associated with the existence of burnout; thus, we determined the odds ratios (ORs) and confidence intervals (CIs) at 95% by logistic regression. To apply the multivariate logistic regression model, independent variables were chosen for each outcome: those independent variables for which $P < 0.05$ and other variables (albeit not significant) as described in the literature were taken as predictors of primary importance. The value of $P < 0.05$ was accepted as statistically significant. The analysis was performed using SPSS 18.0 (SPSS Inc, Chicago, IL).

RESULTS

A total of 630 MBI forms were sent to participating centers; of these, 570 were returned. The proportion of health care staff responding to the survey was 90%. Of the total 570 participants that completed the survey, 367 of them were from PICUs and 203 from PEDs. Most of the participants were female (n = 354, 62%). The demographic features of study participants are demonstrated in Table 1. Low, moderate, and high burnout rates according to 3 subscales (EE, D, and PA) are shown in Table 2. Most frequently (62.5%), burnout was demonstrated in the EE component (n = 356). Burnout syndrome was detected in 76.1% (n = 434) of participants. The infection rate during our study period was 8.7%.

Multiple variables were evaluated for association with the possible existence of burnout. The frequency of participants demonstrating high levels of EE and D and decreased PA in association with these variables is demonstrated in Table 3 and Table 4. The rate of BS in health care staff according to the

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TABLE 1. Demographic Features of Health Care Providers in PICU and Pediatric Emergency Unit

Demographic Features	n	%
Sex		
Female	354	62.1
Male	216	37.9
Age		
25–29	265	46.5
30–39	203	35.6
>40	102	17.9
Working place		
Emergency	203	35.6
PICU	367	64.4
Health care providers		
Doctors		
Intern	19	3.3
Pediatrics resident or specialist	89	15.6
Fellow of PICU or PED	25	4.4
PICU or emergency specialist	27	4.7
Nurse	269	47.2
Secretary/cleaning and patient care staff	23/118	4/20.7
Marital status		
Married	358	62.8
Single/divorced	212	37.2
Child owner	294	51.6
Child care at home	191	33.5
Shift work	350	61.4
Car owner	231	40.5
Home owner	209	36.7
Hobby (yes)	252	44.2
Regular exercise (at least 2 times/wk)	129	22.6
Daily regular breakfast	402	70.5
Social area/night shift room	319	56
Internet access	398	69.8
≥2 d Vacation during the last 3 mo	151	26.5
Education meeting in your department	456	80
Regular drug usage	87	15.3
Total employment time duration in PICU or emergency, y		
<1	97	17
1–3	169	29.6
3–5	121	21.2
>5	180	31.6
Weekly working time, h		
40	147	25.8
41–50	195	34.2
>51	228	40
Salary per month, Turkish lira		
<2000	144	25.3
2000–2999	50	8.8
3000–4999	255	44.7
>5000	120	21.1

EE subdimension of the MBI was significantly higher in respondents who were younger, female, working 51 or more hours totally in a week, having a monthly salary of 2000 to 2999 Turkish lira, single or divorced, not having a child, childcare not at home (child receives care outside home), not owning a home, not doing regular exercise, and not having regular breakfast. The rate of BS in health care staff according to the D subdimension of the MBI was significantly higher in those who were younger, female, working 51 or more hours totally in a week, having a salary of 2000 to 4999 Turkish lira, single or divorced, not having a child, not owning home, and not having regular breakfast. The rate of BS in health care staff according to the PA subdimension of the MBI was significantly higher in those who were younger, with total employment time of less than 1 years, not having a child, not having a car, not having a hobby, not doing regular exercise, and not having regular breakfast (Tables 3, 4). In Table 5, place of employment and subprofessions are evaluated for the presence or absence of BS. According to EE, the frequency of BS was significantly higher in health care staff of PEDs compared with PICUs. The frequency of a high level of EE was significantly higher in nurses compared with doctors and other health care staff. For D and decreased PA, doctors have significantly higher rates of BS compared with nurses (Table 5). The total rate of BS was significantly higher in nurses compared with doctors. The rate of health care staff working 50 hours/week or more in PICUs was 46.9% compared with 32.4% in PEDs, and the difference was statistically significant ($P = 0.003$).

Receiver operating characteristic curve analysis demonstrated that in PEDs, when the daily number of evaluated patients was equal to or more than 44, it predicted the occurrence of BS with sensitivity of 88% and specificity of 66%. In PICUs, when the number of patients cared for by 1 nurse was equal to or more than 3, it predicted the occurrence of BS (sensitivity, 78%; specificity, 62%).

All of the parameters that have statistically significant effect on burnout in univariate analysis were evaluated in logistic regression model. The factors that were evaluated in multivariate model were as follows: type of health care providers, sex, place of work, having a child (yes or no), having a car (yes or no), working in shifts, having a hobby, doing regular exercise, having breakfast, duration of employment time, duration of weekly working time, and amount of monthly salary. This logistic regression model showed that sex, place of employment, having a child, working in shifts, doing regular exercise, having a hobby, and eating breakfast were the factors that significantly affected the presence of BS (Table 6).

DISCUSSION

The major finding of this study was that 76.1% of PICU and PED health care professionals had BS. The rate of a high level of EE was significantly higher in nurses compared with doctors and other health care staff. For D, doctors have significantly higher rates of BS compared with nurses and other health care staff. However, according to occupational subgroups, the highest rate of BS was observed in nurses, followed by physicians and then other health care staff. The frequency of BS was higher in health care providers working in PEDs compared with PICUs. In the logistic regression model, being female, working in a PED, not

TABLE 2. Rate of Severe Burnout and Presence of Burnout According to 3 Subscales of Burnout

Burnout Syndrome	Low, %	n	Moderate, %	n	High, %	n
Emotional exhaustion	15.6	89	21.6	123	62.5	356
Depersonalization	45.6	260	28.6	163	25.4	145
Decreased personal achievement	19.1	109	26.1	149	54.4	310

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TABLE 3. The Frequency of Participants Demonstrating High Level of Emotional Exhaustion, Depersonalization, and Decreased Personal Achievement and Association With Variables

Variables Might Be Associated With Burnout	#Emotional Exhaustion, %	*P*	Depersonalization, %	*P*	Decreased Personal Achievement, n	*P*
Age, y		<0.001		<0.001		0.001
25–29	69.1		32.1		60.8	
30–39	62.1		22.7		52.7	
>40	47,0		14,0		42,0	
Sex		<0.001		.012		.193
Male	49.1		21.5		50.9	
Female	70.9		28.0		56.8	
Employment time, y		.087		.233		.005
<1	56.7		27.8		60.8	
1–3	66.9		28.4		59.8	
3–5	65.5		25.2		55.5	
>5	60.0		22.2		46.1	
Weekly working time, h		.001		.002		.155
40	61.0		17.1		45.9	
41–50	59.0		26.7		56.9	
>51	67.0		30.0		58.1	
Salary, Turkish lira		<0.001		.005		.251
<2000	46.5		19.7		57.7	
2000–2999	72.0		24.0		50.0	
3000–4999	70.6		24.3		51.4	
>5000	60.8		35.8		59.2	
Marital status		<0.001		<0.001		0.45
Married	58.8		21.8		52.7	
Single/divorced	69.2		31.8		57.8	
Child owner		<0.001		<0.001		0.001
Yes	54.3		18.8		48.5	
No	71.6		32.7		61.1	
Child receives care at home		<0.001		0.117		0.117
Yes	16.8		48.4		48.4	
No	30.1		87.4		57.4	

having a child, working in shifts, not having a hobby, not doing regular exercise, and not having breakfast were the factors associated with an increased risk of BS.

In a study evaluating the prevalence of BS and factors that might be associated with it, it was shown that more than the half of the health care providers exhibited BS.[13,14] In an observational study performed in Brazil, the MBI was administered to evaluate the frequency of BS in pediatric intensivists and general pediatricians. The rate of BS in pediatric intensivists was 70% compared with 29% in general pediatricians ($P < 0.01$). The rate of BS was very close to our reported rate of burnout in health care staff of PICUs and PEDs (76.1%).[15] In contrast to the reported rate of BS in developing countries, the rate of BS was different in developed countries. As an example, in a study done in a developed country, the rate of BS in pediatric intensivists was 50%.[16] In our study, the rate of burnout was higher than those of studies reported in developed countries. In a study conducted in Argentina, the rate of burnout in physicians of PICUs was 41% and working more than 36 hours per week on duty increased the risk of burnout (OR, 1.94; 95% CI, 1.1–3.85).[17] In the current study, working more than 50 hours per week significantly increased the rate of EE and D. The differences between the rates of BS of health care workers in developed and developing countries might be related to different work and social environments, working hours, occupational stress, and different levels of job satisfaction in developed and developing countries.

In a study conducted in a neonatal intensive care unit (NICU), health care providers other than physicians reported higher rates of burnout compared with physicians (28% vs 17%, $P < 0.001$).[18] In our study, the rate of burnout was higher in nurses compared with physicians of PICUs and PEDs. In addition to nurses, in our study, we evaluate the other staff (secretaries, cleaners). In this group, the rate of a high level of EE and D was 42.4% and 17.3%, respectively, and the rate of decreased PA was 54.7%. In the current study, in other staff (secretaries, cleaners) group, the total rate of BS was 62.7%. Health care staff other than physicians (nurses, secretaries, cleaners) demonstrated a higher rate of burnout compared with physicians both in our study and in the aforementioned study done in an NICU. This might be related to different workloads of physicians and other health care providers. It is important to emphasize that the nonphysician members of health care team of PICU and PED were also exposed to risk factors that cause BS.

In that study performed in an NICU, during the study period, the infection rate was 8.3 ± 5.1%. In our study, the infection rate during the study period was 8.7%, which was very close to the reported infection rate of the study conducted in the NICU. In that study, a positive association between perceptions of working too hard (OR, 1.15; 95% CI, 1.04–1.28) and increased infection rate

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TABLE 4. The Frequency of Participants Demonstrating High Level of Emotional Exhaustion, Depersonalization, and Decreased Personal Achievement and Association With Variables

Variables Might Be Associated With Burnout	Emotional Exhaustion, %	*P*	Depersonalization, %	*P*	Decreased Personal Achievement, %	*P*
Shift work		0.061		0.49		0.88
Yes	66.6		27.2		54.2	
No	56.6		22.8		55.3	
Car owner		0.24		0.8		0.02
Yes	63.6		26		47.6	
No	62		25.2		59.3	
Home owner		0.04		0.001		0.35
Yes	58.9		19.1		51.2	
No	64.9		29.2		56.5	
Hobby		0.06		0.46		0.03
Yes	59.5		23		48.4	
No	65.2		27.5		59.5	
Exercise		0.03		0.89		<0.001
Yes	55		25.6		38.8	
No	64.9		25.5		59.2	
Breakfast		<0.001		0.01		0.004
Yes	57.5		23.3		50.3	
No	75.5		31		64.9	
Social area/night shift room		0.52		0.71		0.08
Yes	62.7		26.6		50.5	
No	62.7		24.1		59.8	
Internet access		0.30		0.89		0.32
Yes	64.4		25.3		52.2	
No	58.7		26.2		59.3	
≥2 d Vacation*		0.98		0.14		0.27
Yes	62.9		31.1		51.7	
No	62.6		23.5		55.6	
Education† meeting		0.8		0.21		0.38
Yes	63.4		24.1		53.5	
No	59.5		30.6		59.5	
Chronic illness		0.82		0.85		0.67
Yes	65.5		25.3		52.9	
No	62.2		25.6		54.9	

*During the last 3 months.

†Regular education meeting in your department.

was demonstrated. Moderate correlation ($r = 0.34$) between the presence of BS and increased rate of NICU infection was also demonstrated.[18] We can argue that overworked health care providers may be less likely to pursue institutional protocols to control infections that they consider unnecessary or overly burdensome. Overworked health care providers are also less likely to notice

TABLE 5. The Association of Frequency of Participants Demonstrating High Level of Emotional Exhaustion, Depersonalization, and Decreased Personal Achievement With Health Care Provider Subgroups and Place of Employment

Work Place/Profession Subgroups	Emotional Exhaustion, %	*P*	Depersonalization, %	*P*	Personal Achievement, %	*P*	Burnout Syndrome, %	*P*
Work place		.015		.075		.608		.04
Emergency	67.7		30.8		52.7		79.1	
PICU	59.9		22.6		55.6		73.7	
Health care providers		<0.001		<0.001		.043		.01
Doctors	62.5		34.4		60.6		76.7	
Nurses	73.2		24.5		50.9		82.8	
Other staff	42.4		17.3		54.7		62.7	

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TABLE 6. Logistic Regression Analysis of Factors Effecting Burnout in Univariate Analysis

Variables	OR	95% CI	P
Sex (female vs male)	1.6	1.1–2.6	0.03
Work place (pediatric emergency vs PICU)	1.8	1.3–3	0.01
Child owner (no vs yes)	2.2	1.2–3.6	0.014
Working in shifts (yes vs no)	1.5	1.2–2.5	0.01
Hobby (no vs yes)	1.9	1.08–2.5	0.021
Regular exercise (no vs yes)	2	1.1–3.3	0.01
Breakfast (no vs yes)	2.2	1.4–3.9	0.006

short comings in their health care services. In these circumstances, increased health care–related infection rates may contribute to increased rates of burnout due to the prolonged length of hospital stay of these patients. Burnout due to increasing length of hospital stay and antibiotic usage due to increased infection rates might also be associated with increased costs of health care services. Therefore, early intervention for burnout might have economical contributions for the economy of the country. To solve this problem, early recognition and intervention among health care providers who are at risk of BS is very crucial for places having higher workloads, like PICUs and PEDs.

The nurse-to-patient ratio should be vigorously followed by hospital administrations and ministries of health, especially in work places providing critical care, like PICUs and PEDs. In our study, when the number of patients cared for by one nurse was equal to or more than 3 in a PICU, it predicted the occurrence of BS. Therefore, the number of nurses and other health care staff should not be allowed to decrease to a certain level in PICUs and PEDs.[19,20]

In a previous study, the frequency of BS was higher in daytime workers and experienced health care professionals.[18] In our study, burnout was increased in health care providers who worked nightshifts. In addition, the prevalence of burnout was not associated with increased years of employment. In the current study, the rate of decreased PA was 60.8% in health care workers who had been working less than 1 year compared with the rate of 46.1% among those who had been working at least 5 years or more. In other words, the PA subscale of burnout was inversely related to years of experience.[18]

In a meta-analysis including a total of 13 studies, most of them from developed countries and evaluating burnout in emergency nurses, the reported prevalence of each subscale was 31% (95% CI, 20–44) for EE, 36% (95% CI, 23–51) for D, and 29% (95% CI, 15–44) for low PA.[21] In the current cohort, we evaluated the nurses of PICUs and PEDs together, and the rate of high scores according to subscales was 73.2% for EE, 24.5% for D, and 50.9% for decreased PA. Burnout rates according to the EE and PA subscales were higher in the nurse population in our study compared with the rates indicated in the previous meta-analysis.[21] The meta-analysis evaluated the rate of BS in nurses just from emergency department. However, the current study included nurses working in PED and PICU. The differences in rate of EE and PA subscale of BS in meta-analysis compared with that in our study might be explained by different working conditions and workload in emergency and intensive care unit. In addition to this, in the process of data collection of the meta-analysis, the authors did not include a limitation or result filter. The search terms were "emergency AND nurse AND burnout" was screened during process of data collection for meta-analysis. We do not know how many of the nurses are working in pediatric emergency department and how many of them are working in adult emergency department. The working conditions and the encountered diseases were different in adults and pediatric age groups. This might be an explanation for the difference in between the EE and PA subscale in meta-analysis and the current study.

In a study conducted in an adult intensive care unit, female health care providers were reported to have higher levels of burnout compared with males.[22] In a cross-sectional inventory applied to pediatric critical care physicians (n = 253), the risk of burnout was 2 times higher in female physicians (OR, 1.97; 95% CI, 1.2–3.4) compared with male physicians. Similarly, in this study, we showed that female health care professionals had higher rates of BS compared with male health care professionals (hazard ratio, 1.6; 95% CI, 1.1–2.6; $P = 0.03$). This might be related to psychosociological and physical differences between men and women. However, a recent lifestyle survey reported that male intensivists reported higher rates of BS than women (50% vs 45%).[23] This difference may also reflect the diversities of various populations.

In a previous study, after adjusting for age and sex, those who exercised regularly were 44% less likely (adjusted OR, 0.56; 95% CI, 0.32–0.99) to have BS.[24] In our study, those who did not perform regular exercise compared with health care professionals doing regular exercise had 2 times higher risk of experiencing burnout (hazard ratio, 2; 95% CI, 1.1–3.3; $P = 0.01$).

Until recently, BS among health care professionals in PICUs and PEDs remained relatively unrecognized. To raise awareness of BS, the Critical Care Societies Collaborative developed a framework and a call for action.[25] To reach this goal, it is very important to know the diagnostic criteria, prevalence, causative factors, and consequences of BS. The findings of our study indicate that nurses working in PICUs and PEDs experience anxiety and stress, which in turn produce a high grade of EE. Unsatisfactory work conditions with insufficient time to develop self-caring activities and an excessive workload may contribute to the high rate of BS. Early recognition of BS is very important. Significantly, only 29% of intensivists seek professional help for BS.[23] Resilience programs for critical care nurses and other assistant health care staff might be designed. Therefore, departments that desire to create resilience programs for PICU and PED health care providers to reduce BS need an understanding of the barriers and concerns relevant to their local health care professionals.

There were limitations of the current study. We did not ask questions regarding participants' expectations for relieving their BS. Another important question to be asked in the future would be whether respondents would like to continue working in PICUs and PEDs. Another limitation of the study was regarding the validity of Turkish version of MBI. The Cronbach α value of 0.65 for D subdimension of Turkish version of MBI was demonstrated acceptable but limited reliability.

CONCLUSIONS

Symptoms of burnout should be immediately recognized in health care professionals of PICUs and PEDs. Psychological support and resilience programs might be designed for health care professionals. By creating early intervention programs to prevent BS, shortages of health care professionals can be avoided. It is obvious that BS is emerging as one of the most serious problems among PICU and PED health care providers.

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10. ***Effects of Traumatic Events, Compassion Fatigue, Self-esteem, and Compassion Satisfaction on Burnout of Nurses in Emergency Department (ED)***

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Effects of Traumatic Events, Compassion Fatigue, Self-esteem, and Compassion Satisfaction on Burnout of Nurses in Emergency Department (ED)

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Purpose: The purpose of this study is to verify the factors that determines burnout of nurses in emergency department. **Methods**: The survey was given to 170 ED nurses which are located in Busan from July 1st to August 31st of 2012.The results were analyzed by descriptive statistics, t-test, ANOVA, pearson correlation coefficients and stepwise multiple regression using SAS 9.2 program. **Results**: There were statistically significant differences in burnout depending on gender, position, workplace satisfaction, job satisfaction. Significant positive correlation between compassion fatigue and burnout was found. Also significant negative correlation was found between self-esteem, compassion satisfaction and burnout. Factors influencing burnout were self-esteem, compassion satisfaction and compassion fatigue with R 2 value 58.0%. **Conclusion**: Considering these results, it seems that great efforts will be needed for reducing burnout by mitigating the emergency nurses' compassion fatigue and introducing programs to increase the self-esteem and compassion satisfaction.

Key Words : Compassions, Fatigue, Self-esteem, satisfaction, Burnout

Introduction

1. Necessity of research

Unlike other departments, emergency room nurses require high-level nursing skills, and are always exposed to work and dangerous environmental factors in a tense situation, resulting in frequent physical and mental difficulties and pain, resulting in stress. And receive exhaustion it is often experienced (Kim, 2012).

If exhaustion cannot be resolved, mental and psychological losses such as feeling of failure, guilt, and regret will result in a vicious cycle of increasing job stress again by lowering job satisfaction and job performance. It also has a negative impact on social organizations (Youn, 2009) Nurses working in the emergency room are patients who suffered severe trauma due to traffic accidents, falls, violence, abuse, or sexual violence, or hunger, drowning, and death

Key words: Compassion , fatigue, self-esteem, satisfaction, exhaustion
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sudden and tense nursing site to deal with patients suffering from terrible accidents such as suicide and other deaths such as suicide and death such as arterial amputation, alternation, artery amputation, etc. Esau's work performance causes extreme physical and mental stress (Cohen & Mulvaney, 2005). A traumatic event is an actual or threatening death or serious injury, or an event that threatens an individual's physical well-being or is witnessed to happen to another person, resulting in extreme fear, helplessness, or fear This was the case of the American Psychiatric Association (APA), 2000). Emergency room nurses are exposed to various trauma patients due to the specificity of the emergency room, and there may be a variety of reactions according to this. It can be seen that it is a mentally negative experience. Recently, studies on the stress experienced by direct and indirect exposure of psychological counselors, nurses, and firefighters, including social workers with jobs to assist others, to shocking events (Kong, 2005)), as the primary contact for victims, they can experience stronger intensity and longer duration than the trauma they can feel in their daily lives about the pain they complain about (Choi & Song, 2009). Traumatic stress varies depending on whether the source of stress is primary or secondary. Secondary traumatic stress is a natural consequent behavior and emotion that arises by knowing about traumatic events experienced by other people. It refers to the stress created by or wanting to help people who suffer from trauma or suffer from it (Figley, 1995).

Several studies (Han, 2005; Kim, 2007) have suggested the importance of self-esteem as a variable that can relieve exhaustion. Positive thinking about yourself serves as a basis for a smooth relationship with others and plays an important role throughout your life (bae & Jo, 2004). Workers perceive high and low self-esteem even when conflict arises due to emotional labor. If you do, relieve exhaustion It could be an effective countermeasure to prevent (Brouwers, Evers, & Tomic, 2001).

Consensus satisfaction, as opposed to empathy, helps caregivers, teachers, social workers, clergy, and others who have suffered or suffered trauma. Is a positive aspect of working. Sympathetic satisfaction is a joy to help others, and is a joyful feeling arising from being friendly to colleagues and having the ability to help others (Figley & Stamm, 1996) As the negative effects of empathy fatigue were revealed through various studies, the concept of compassion satisfaction was introduced by Stamm (2002) as one of the protection factors for empathy fatigue. He said that even if the subject's situation was very dangerous or the stress level was high, it would not only be a source of strength to keep working, but also empathy satisfaction could reduce fatigue and burnout. This sympathetic satisfaction improves the self-esteem of the job performer and enables the job performer to feel confident (Collins & Long, 2003).

The emergency room is a site where various trauma events are handled due to the nature of the work. Nurses working in this environment are expected to experience more exhaustion due to a lot of stress. However, previous studies related to exhaustion among emergency room nurses showed that violence (Yang & Jung, 2009), social psychological stress (Jeung, 2011), job satisfaction (Sung, 2008), and research related to coping style (Kim, 2012), mostly self-esteem and empathy that can affect burnout Factors such as satisfaction and empathy are rarely addressed. In order to prevent or reduce the exhaustion of emergency room nurses, it is necessary to understand the relationship between factors that have not yet been addressed and how these factors affect exhaustion.

Therefore, this researcher investigated the correlation between their traumatic event experiences,compassion fatigue, self-esteem, compassion satisfaction, and burnout in emergency room nurses, and identified factors affecting burnout to improve the quality and quality of life of the nurses. Furthermore, it was conducted to provide basic data for improving the quality of nursing.

2. Research purpose

The purpose of this study is to identify the factors affecting the exhaustion of emergency room nurses, and the specific purpose is as follows.

- Identify burnout according to the general characteristics of the emergency room nurse.
- Identify the trauma event experience, compassion fatigue, self-esteem, compassion satisfaction, and exhaustion of the emergency room nurse.
- The relationship between the trauma event experience, fatigue, self-esteem, satisfaction, and Burnout of the emergency room nurse is identified.
- Identify the factors affecting exhaustion of emergency room nurse.

Research method

1. Research Design

This study is a descriptive research study to investigate the effects of emergency room nurse trauma events, empathy fatigue, self-esteem, and empathy satisfaction on burnout.

2. Research Subject

A questionnaire is distributed to 190 subjects who understand the purpose of this study and agree to participate in the study among nurses working in the emergency room of a total of 10 hospitals, including 3 hospitals in B hospitals and 7 hospitals with 500 beds. And recovered. Among them, 170 were selected for the final study analysis. The number of samples was calculated using G*Power, and when multiple predictive factors were applied to the multiple regression analysis with a significance level of .05, a medium-sized effect of .25, and a test power of .90, 164 were shown, but the dropout rate of the subjects was When considered, 170 were met.

3. Data Collection

Data was collected from July 1 to August 31, 2012. This study was initiated by IRB approval (No. 2012-103) by the Institutional Review Board of Hospital B, and it was promised that the data collected for the study would not be used for purposes other than research. After the researcher visited the target hospital and explained the purpose and method of the study to the nursing department and the emergency room nurse, they sought cooperation, explained the purpose of the study to the research subject, received the written consent, distributed and collected the questionnaire, and collected the data. . Out of a total of 190 questionnaires, 170 copies (recovery rate 89.4%) were collected and 170 copies were used as data for this study.

4. Research Tools

1) Experience of trauma

The trauma case experience questionnaire developed by Kim (2011) consists of 13 questions. In this study, according to the type of trauma, the frequency of experience in the past month was answered. ' I rarely experience it. ' At 1 point ' I experience it very often. ' It measures up to 5 points and ranges from a minimum of 13 to a maximum of 65. The higher the score, the higher the frequency of traumatic events. Kim (2011) Cronbach's confidence in the sphere α=. 90 and Cronbach's in this study α=. It was 91.

2) Compassion fatigue

Stamm (2009) corrects compassion satisfaction/fatigue Self test for Helpers developed by Figley (1995) . Complementary PROQOL Version 5 (2009) (Professional Quality of Life Scale; compassion satisfaction/fatigue Subscale-Version was used by Kim (2011). It consists of 10 questions of negative concept ' Not at all ' 1 point, ' it really is ' The score is 5 points and it is a 5 point Likert scale, and the higher the score, the stronger the empathy fatigue. The reliability of the tools at the time of development was Cronbach's. α=. 81, Cronbach's in this study α=. It was 74.

3) Self-esteem

Rogenberg (1962)'s self-esteem measurement tool was used by Jon (1974), which was modified to fit the situation in Korea. Five positive questions and five negative questions out of a total of 10 questions were asked, and from a very negative response to a positive response, a 5-point Likert scale " Not at all " From 1 point " It really is " A score of 5 was given to the negative questions, and the negative questions were evaluated on the contrary, and the higher the self-esteem, the higher the self-esteem. Cronbach's reliability at the time of development α=. 85, and in Jon's (1974) study α=. 62, Cronbach's in this study α=. It was 73

4) Compassion satisfaction

Stamm (2009) corrects compassion satisfaction/fatigue Self test for Helpers developed by Figley (1995) . Complementary PROQOL Version 5 (2009) (Professional Quality of Life Scale; compassion satisfaction/fatigue Subscale-Version was used by Kim (2011). This tool consists of 10 questions with a positive concept, and a 5-point Likert scale. ' Not at all ' At 1 point ' it really is ' Score was given to 5 points. The higher the score, the higher the empathy satisfaction. The reliability of the tool at the time of development was Cronbach's α=. 88, Cronbach's in this study α=. 85.

5) Burnout

Stamm (2009) corrects compassion satisfaction/fatigue Self test for Helpers developed by Figley (1995) . Complementary PROQOL Version 5 (2009) (Professional Quality of Life Scale; compassion satisfaction/fatigue Subscale-Version was used by Kim (2011). A total of 10 items are on a 5-point Likert scale, and 5 positive and 5 negative questions are asked ' Not at all ' 1 point, ' It really is ' A was 5 points, and the positive question was reversed. The higher the score, the higher the exhaustion. The reliability of the tool at the time of development was Cronbach's α=. 75, Cronbach's in this study α=. It was 71.

5. Data Analysis

The collected data were analyzed as follows using the SAS 9.2 program, and the specific method is as follows.

- The general characteristics of the emergency room nurses and the traumatic event experience yielded frequency, percentage, mean, and standard deviation.
- The compassion fatigue, self-esteem, satisfaction, and burnout of the emergency room nurses were analyzed by means and standard deviation.
- Fatigue according to the general characteristics of the emergency room nurse, self-esteem, satisfaction, and exhaustion were analyzed using t-test and ANOVA analysis.' It was set as test.
- The correlation between the traumatic event experience, fatigue, self-esteem, satisfaction, and burnout of the emergency room nurse was tested using Pearson's correlation coefficient.
- Factors influencing the exhaustion of emergency room nurses were analyzed by stepwise multiple regression.

6. Research Limitations

This study is the result of research on emergency room nursing at 3 hospitals in Busan and 7 hospitals in secondary hospitals, so be cautious about generalizing this study.

Results

1. Difference test of burnout degree according to general characteristics

Looking at the general characteristics of the emergency room nurses (Table 1), the average age was 28.1 years, the married status was 78.8% (134) unmarried, and 21.2% married, and 64.1% of 3 years graduation (109 students), 4 year graduation was 22.9% (39), and graduate school 12.9% (22). 59.4% (101 people) answered that religion is unreligious Did. The total clinical experience was 60.8 months on average, and the emergency room experience was 39.0 months on average, with 91.8% (156) of the general nurses. Satisfaction at workplace was 61.2% (104 persons), work satisfaction was 40.0% (68 persons), and satisfaction was 41.8% (71 persons). , 13.5% (23 people) was not needed.

The different in exhaustion rate according to the general characteristics of the emergency room nurse was gender (t=2.81, p=.006), position (t=2.33, p=.021), work satisfaction (t=2.50,p=.013), work satisfaction (t=8.12, p<.001) showed statistically significant differences. In other words, the average score of males was 24.8±4.3 for males and 28.0±4.0 for females, and the average score was 28.0±4.0 for general nurses and 25.4±4.9 for primary nurses. The average group who answered satisfaction with workplace satisfaction was 27.1±4.0, and the group who answered dissatisfied was average 28.7±4.1, and the group who answered satisfaction with satisfaction was average 26.3±4.1, and the group who answered normal was average. The average of 28.6± 3.9 and unsatisfactory group was 29.3±3.6. Meanwhile, Scheffe' As a result of the post-test, the job satisfaction average and the dissatisfaction group were higher than the satisfaction group (Table.1)

2. Experience of trauma, compassion fatigue, self-esteem, compassion satisfaction and exhaustion

The average score of trauma cases experienced by the emergency room nurse was 31.9±9.76, the average of 32.1±4.91 for sympathetic fatigue, the average of 28.5±2.97 for self-esteem, the average of 28.2±4.79 for sympathetic satisfaction, and the average of 30.7±2.80 for exhaustion (Table 2).

3. Relationship between traumatic event experience, compassion fatigue, self-esteem, compassion satisfaction and burnout

Compassion fatigue and burnout of emergency room nurses were positively correlated (r=.38, p<.001), self-esteem and satisfaction were positively correlated (r=.52, p<.001), On the other hand, self-esteem and exhaustion are negatively correlated (r=-.60,p=.005), satisfaction and burnout are negative correlations (r=-.57, p<.001). In other words, the higher the empathy fatigue, the higher the burnout, and the higher self-esteem and the higher the satisfaction, the lower the burnout. However, there was no significant relationship between satisfaction and fatigue, and the relationship was low (Table 3)

4. Burnout influence factors

Among the general characteristics, the exhaustion influencing factors of the emergency room nurse were analyzed by gender, position, workplace satisfaction, work satisfaction and traumatic event experience, empathy fatigue, self-esteem, and empathy satisfaction as independent variables and exhaustion as a dependent variable. Did. As a result of testing the regression equation as a result of the multiple regression analysis, the Durbin-Watson statistic was 2.09, and there was no autocorrelation, and the Variance Inflation Factor (VIF) value was 1.05 as sympathetic fatigue, 1.40 as self-esteem, and 1.39 as sympathetic satisfaction. There was no multicollinearity problem because it did not exceed the standard of 10 or more.The regression model was found to be significant (F=75. p<.001), a modified coefficient of determination representing the explanatory power of the model (Adj. R_2) Appeared as .58. The most influential factor in the emergency room nurse burnout is empathy (β=-.45). Next, sympathetic emergency room nurse burnout is empathy (β=-.45). Next, sympathetic fatigue (β=.38), and there was a positive correlation, self-esteem (β=-.31) showed a negative correlation (Table 4)

Table 1. Burnout according to General Characteristics (N= 170)

Characteristics	Categories	n(%) or M±SD		M±SD	t or F	P	Scheffé
Gender	Male	14	(8.2)	24.8±4.3	2.81	.006	
	Female	156	(91.8)	28.0±4.0			
Age (year)	≤ 25	60	(35.3)	28.5±4.2	2.52	.060	
	26~30	75	(44.1)	27.9±3.6			
	31~35	22	(12.9)	26.4±4.5			
	≥ 36	13	(7.7)	25.9±5.0			
		28.1± 5.40					
Marital status	Single	134	(78.8)	27.8±3.9	0.22	.839	
	Married	36	(21.2)	27.6±4.9			
Education	Junior college	109	(64.1)	27.9±3.9	2.53	.083	
	University Master	39	(22.9)	28.3±3.5			
	Grade	22	(12.9)	26.0±5.5			
Religion	Christianity	19	(11.2)	27.1±3.6	1.60	.173	
	Catholic	18	(10.6)	28.4±5.0			
	Buddhist None	32	(18.8)	28.5±2.8			
		101	(59.4)	27.5±4.3			
Clinical careers (year)	< 1	15	(8.8)	26.5±4.3	1.60	.173	
	1~3	59	(34.7)	28.3±4.1			
	4~6	31	(18.2)	28.6±3.2			
	7~9	49	(28.8)	27.5±4.3			
	≥ 10	16	(9.4)	26.1±4.7			
		5.7±4.85					
Clinical careers in emergency department (month)	≤ 12	31	(18.2)	27.3±3.9	0.46	.764	
	13~24	45	(26.5)	27.9±4.2			
	25~36	32	(18.8)	28.2±4.3			
	37~60	26	(15.3)	28.2±3.9			
	≥ 61	36	(21.2)	27.2±4.1			
		3.9±2.96					
Position	Staff nurse Charge	156	(91.8)	28.0±4.0	2.33	.021	
	Nurse	14	(8.2)	25.4±4.9			
Workplace Satisfaction	Satisfaction	104	(61.2)	27.1±4.0	2.50	.013	
	Dissatisfaction	66	(38.8)	28.7±4.1			
Job satisfaction	Satisfaction a	71	(41.8)	26.3±4.1	8.12	<.001	a < b=c
	Average b	68	(40.0)	28.6±3.9			
	Dissatisfaction c	31	(18.2)	29.2±3.6			
Management of compassion fatigue	Necessary	147	(86.5)	28.0±4.0	1.57	.117	
	Unnecessary	23	(13.5)	26.5±4.4			

Table 2. Degree of Traumatic Events, Compassion Fatigue, Self-Esteem, Compassion Satisfaction, and Burnout (*N*= 70)

Factors	Possible range	Obtained range	M ± SD	Item mean
Traumatic events (13 items)	13 – 65	14 – 54	31.9 ± 9.76	2.4
Compassion fatigue (10 items)	10 – 50	19 – 47	32.1 ± 4.91	3.2
Self-esteem (10 items)	10 – 40	20 – 36	28.5 ± 2.97	2.8
Compassion satisfaction (10 items)	10 – 50	14 – 40	28.2 ± 4.79	2.8
Burnout (10 items)	10 – 50	16 – 40	30.7 ± 2.80	3.0

Table. 3 Correlation among Variables (*N*=170)

Variabels	Traumatic events	Compassion Fatigue r (p)	Self-esteem r (p)	Compassion Satisfaction r (p)
	r (p)	*r (p)*	*r (p)*	*r (p)*
Compassion fatigue	.06 (.412)			
Self-esteem	.01 (.942)	-.14 (.072)		
Compassion satisfaction	-.12 (.115)	.07 (.340)	.52 (<.001)	
Burnout	.20 (.119)	.38 (<.001)	-. 60 (.005)	-. 57 (<.001)

Table 4. Factors affecting Burnout (*N*= 170)

Variables	B	SE	β	t	*p*
(Constant)	43.197	2.527		17.09	<.001
Self-esteem	- 0.438	0.084	-.31	- 5.19	<.001
Compassion satisfaction	- 0.377	0.050	-.45	- 7.57	<.001
Compassion fatigue	0.324	0.045	.38	7.28	<.001

Adj. R^2 = .58, F =75.41, p<.001

Argument

In this study, the trauma incident experience of the emergency room nurses ranged from 13 to 65 points with an average of 31.9 points. These results are Seoul, Incheon, Chungbuk. An average of 32.01 points in Kim's (2011) study of local emergency room nurses, targeting nurses at national emergency medical centers. This is similar to the result targeting nurses at national emergency medical centersThis is similar to the result of Jeon (2012), which averaged 33.69 points. These results are thought to show that the emergency room nurse is experiencing an average level of trauma. In this study, sympathetic fatigue averaged 32.1 points in the range of 10 to 50 points.This was the same tool, and it was sympathetic to the emergency room nurse. Kim's (2011) study of furnace results in 28.20 points The result is higher, but Kim's (2011) study area is emergency The average number of emergency medical specialists per medical institution is 2.5, The average mortality rate of severe trauma patients was 1.62, and this study. The role is 1.1 emergency medical specialists and 2.13 death rates (National emergency medical center, 2011). These results suggest that the replacement of the nursing staff due to the lack of emergency medical specialists and the stress caused by the

higher mortality rate contributes to increasing the sympathetic fatigue of the emergency room nurses. Therefore, it is considered that the sympathetic fatigue of the emergency room nurse is above average, and it is necessary to manage the sympathetic fatigue they are experiencing.

In this study, self-esteem was average 28.5 points in the range of 10-40 points. This result is lower than the average of 30.90 points in Hwang's (2008) study of clinical nurses with the same tool. Such The result is that the emergency room nurses are judged to have a relatively low self-esteem due to the performance of their work in an urgent and tense nursing site compared to other departments' nurses, which leads to exhaustion. It seems to be necessary to prepare and continue efforts.

In this study, sympathy satisfaction averaged 28.2 points in the range of 10 to 50 points. This is lower than the score of 32.12 in a study by Kim (2011), which measured empathic satisfaction among nurses in emergency rooms with the same tool, and a score of 32.80 in a study by Lee (2012) for general nurses. In this study, the difference between the results of Kim (2011) and Lee (2012) was found to be related to the high empathy satisfaction of the subjects, while the empathy fatigue of the subjects was lower than that of the present study. It seems to have lowered the sympathetic satisfaction of. Stamm (2002) As this medical practitioner claims to gain satisfaction by helping others, to improve the empathy satisfaction of emergency room nurses, ongoing research is needed to identify variables that affect their empathy. Based on this, it is considered that it is necessary to prepare and apply specific programs to improve their satisfaction.

In this study, exhaustion was an average of 30.7 points in the range of 10 to 50 points, which was measured for the emergency room nurses using the same tool.This is points, which was measured for the emergency room nurses using the same tool.This is similar to the result of Jeon (2012) with 31.68 points. These results seem to suggest that, unlike other departments, the emergency room nurses receive more stress due to the specificity, situational and interpersonal factors of the emergency room, and the exhaustion also increases. Therefore, there is a need to provide continuous attention and improvement measures to lower the exhaustion of emergency room nurses.

The burnout according to the general characteristics of the emergency room nurse showed statistically significant differences in gender, job title, job satisfaction, and job satisfaction. This is the result of gender (gross clinical experience) and emergency room experience in the study of Sung (2008) for emergency room nurses.In Jung's (2009) research, this is partially consistent with the results of differences in education, emergency room experience, and future emergency room work plans.

Choi (2010) said that women are more emotionally sensitive than men, and are more easily shaken by emotions, so exhaustion is higher. In addition, in this study, there was a difference in exhaustion according to job satisfaction, which is considered to be better suited to the working environment and conditions as the subject is satisfied with the job, and as a result, less exhausted. However, studies on exhaustion in emergency room nurses have been insufficient. n the actual situation, the study results are inconsistent, so it is expected that a study involving variables not covered in the general characteristics will be needed to clarify this.

As a result of verifying the correlation between the trauma event experience and sympathy fatigue, self-esteem, sympathy satisfaction, and exhaustion of the emergency room nurse, the trauma event experience of the emergency room nurse was not significantly related to the sympathy fatigue. This is different from the previous study showing correlation (Jeon, 2012; Kim, 2011). However, Lee and Yu (2010) said that the degree of sympathetic fatigue in his study is likely to be closely related to the vulnerable environment due to overwork, role conflicts, etc., as well as direct exposure to traumatic patients. Therefore, the subjects of this study experienced similar trauma cases to previous studies, but when the degree of empathy was higher, the subjects' high level of empathy was sufficiently affected by various environmental factors. It seems to be a stressed result of not being able to perform, but further research is needed to clarify this.

Empathy fatigue and burnout showed a positive correlation, and empathy satisfaction and burnout showed a negative correlation. In the study of Kim (2011) and Lee (2012), the higher the empathy fatigue, the higher the exhaustion and the higher the empathy satisfaction. This was consistent with the result that the lower the exhaustion, the higher the exhaustion. There was no significant relationship between empathy fatigue and empathy satisfaction, which is consistent with the study of Kim (2011) and Lee (2012) in nurses. These results are thought to imply that the sympathetic fatigue of nurses has the influence of other variables besides sympathetic satisfaction, and further research on the relationship between sympathetic fatigue and sympathetic satisfaction seems to be needed. Self-esteem and empathy satisfaction showed a positive correlation, according to a study by Collins and Long (2003), who found that empathy satisfaction improves the self-esteem of the job performer and enables the job performer to feel confident. Will match. On the other hand, self-esteem and burnout showed a negative correlation, which is consistent with Kyung's (2012) study that low self-esteem increases burnout. As a result, it is considered that it

is necessary to increase the self-esteem of the emergency room nurse in order to reduce exhaustion.

Among the factors influencing the exhaustion of the subjects, empathy satisfaction was the most influential factor, followed by empathy fatigue and self-esteem, and the overall explanatory power was 58.0%. Lee and Hong (2012) said that the higher the self-esteem, the higher the sense of achievement in their work, the higher the level of satisfaction with life, and the higher the level of self-esteem. Therefore There is a need for continuous efforts to reduce exhaustion by exploring ways to reduce empathy fatigue and to develop a variety of educational contents that can improve self-esteem and empathy satisfaction of emergency room nurses. As a result, it is thought that the emergency room nurses will adjust well to the surrounding environment, thereby improving the quality of nursing and further assisting in patient care by pursuing the interests of others rather than their own.

This study identifies the correlation between the traumatic event experience, empathy fatigue, self-esteem, empathy satisfaction, and burnout of emergency room nurses and identifies the factors affecting burnout to find basic data for finding ways to alleviate burnout. It is meaningful to provide.

Conclusion and Suggestions

This study attempted to identify the relationship between the emergency room nurse's traumatic event experience, empathy fatigue, self-esteem, empathy satisfaction, and burnout, and to determine the effect of the emergency room nurse exhaustion. The study subjects were 170 nurses in the emergency room and data were collected from July 1 to August 31, 2012. The collected data were analyzed using descriptive statistics, t-test, ANOVA, Pearson correlation coefficient, and stepwise multiple regression using SAS 9.2 program. The exhaustion of the emergency room nurse showed significant differences in gender, job title, job satisfaction, and job satisfaction, and the emergency room nurse's empathy correlated positively with exhaustion, and exhaustion negatively correlated with self-esteem and empathy satisfaction. Showed. The most influential factor in the emergency room nurse's exhaustion was empathy satisfaction, and the overall explanatory power was 58.0%, including empathy fatigue and self-esteem. In view of the results of this study, it is urgent that efforts to actively. introduce and apply programs to reduce empathy fatigue while increasing their self-esteem and empathy in order to alleviate exhaustion of emergency room nurses. On the other hand, the research subjects are limited to some nurses who are limited by region and institution, and future retitive research that are expanded by expanding the area and research subjects are suggested

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11. *Effects of Workplace Bullying, Job Stress, Self-esteem, and Burnout on the Intention of University Hospital Nurses to Keep Nursing Job*

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대학병원 간호사의 직장 내 약자 괴롭힘, 직무 스트레스, 자아존중감 및 소진이 재직의도에 미치는 영향

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Effects of Workplace Bullying, Job Stress, Self-esteem, and Burnout on the Intention of University Hospital Nurses to Keep Nursing Job

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Purpose:Medical institutions and their patients benefit from continued employment of nurses. In this study an assessment was done of important factors that influence nurses' intention to leaving their jobs. **Methods**: The sample consisted of 229 university hospital nurses. Data were analyzed using frequency, percentage, mean, standard deviation, t-test, ANOVA, Scheffe, Pearson's Correlation Analysis, and Hierarchical Multiple Regression. **Results**: The control variables, including age, current position, and health status explained 18% (F=16.37, p<.001) of variance in retention intention. The control variables, bullying, job stress, self-esteem, and burnout collectively explained 27% of variance in retention intention. **Conclusion**: The findings indicate that the factors influencing retention intention are age, current position, and health status, while self-esteem and burnout in work places are new and more recent factors that impact retention intention. These findings can be utilized to develop strategies to increase self-esteem and retention intention.

Key Words:Bullying, Self-esteem, Job stress, Burnout, Retention

Introduction

1. Necessity of research

Lately 2015 In the wake of the MERS crisis in 2011, the awareness of the importance of hospital infection management and patient safety has been strengthened, and there is a tendency to actively use nurses at the national level to promote the health of the people and ease the burden of disease. The lack of sufficient nursing staff has prevented qualitative nursing. All (1). This is a shortage of nurses who can actually work in the medical field. Nursing personnel and patient safety are highly correlated issues. As the work environment of nurses is not safe, and job satisfaction falls, it threatens patient safety, reduces patient satisfaction, and nursing personnel. The quality of capital deteriorates.

As the research on the turnover experience and turnover intention of nurses related to the shortage of

Key words: Bullying in the workplace, job stress, self-esteem, exhaustion, intention to work

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nurses progressed quantitatively and qualitatively, Kim and Kim (3). Age through literature analysis on turnover intention in korea (50%), education (36,7%), single (30,0%) , spot (30,3%), clinical experience (46,7%), low salary (23.3%), Job Satisfaction (50.0%), Organizational Commitment (40.4%), Internal Marketing (20.0%), Job stress (26.7%) Reported as having an effect. But the intention is to stop the nurse from finding another new job, or to stay in the current nursing job. Research on job intention is insufficient. The low intention to work will create the need to hire new nurses who continue, and if this persists, it will lead to disharmony between nursing care and nurses.

Therefore, grasping the intention of the nurse to work can have a positive effect on creating an organizational environment that allows the nurse to continue working, so it is an urgent matter to study the intention to work rather than to grasp the intention to change jobs.[5]. In the meantime, domestic research on the intention to work has been conducted by nursing professionals, Professional self-concept, average wages, He said that the ability to perform nursing affects the intention to work. In foreign studies, job satisfaction, Organizational Commitment, Age, job satisfaction, Working, Experience, Education level, teamwork, gender, Flexible work schedule and job satisfaction. For example, different results are reported for each study presented as employment intention and related variables.

Bullying of the weak in the workplace as a leading variable related to the recent intention to work (workplace bullying) as the results of the study were reported. There is growing interest in bullying in the workplace. Bullying in the workplace is primarily a work-related amount of work, excessive monitoring of work that cannot be undertaken or implied by continuous criticism or humiliation or resignation. It means a negative behavioral experience in the criticism or humiliation or resignation. It means a negative behavioral experience in the workplace such as being yelled at or suddenly angered by another person. In the case of nurses, the frequency is significantly higher than other health care workers in cooperation with other departments, and it is a serious problem in nursing organizations that emphasize teamwork. Physical effects such as fatigue, depression, anxiety, Absenteeism, as well as mental effects such as suicide. It affects the entire organization, such as job satisfaction reduction and exhaustion In particular, nurses who are the targets of bullying and hostility in the workplace are more likely to leave their current job or career as a nurse. Furthermore, exhaustion of nurses can ultimately act as a major cause of deterioration in the quality of nursing, so it is thought that attention and countermeasures are needed.

One of the factors that can affect exhaustion is self-esteem. Self-esteem is to understand yourself as a special entity,It's about showing a positive or negative attitude toward the self and how valuable you feel about yourself. Therefore, a person with high self-esteem gets a sense of achievement through his job,Because of that sense of achievement, you will show your professional confidence and competence, the higher self-esteem, the more job commitment and job satisfaction high degree of turnover and low turnover intention. Comprehensive research results so far have shown that exhaustion or intention to work in relation to bullying in the workplace has been studied separately,but how bullying and exhaustion in the workplace affects job intention, including comprehensive self-esteem and job stress. It has not been studied yet, and more understanding of the relationship between variables is needed.

Therefore, this study is the basic data of the plan to increase the intention of employment by grasping the degree of bullying in the workplace of nurses of university hospitals and confirming the effect of bullying, job stress, self-esteem and exhaustion in the workplace on job intention wanted to prepare.

2. Research Purpose

The purpose of this study was to prevent bullying, job stress, and job stress in the workplace of a university hospital nurse. It is to identify related factors that affect

Self esteem and exhaustion in job intention.

The specific purpose is as follows :

- Identify the subject's general characteristics.
- Bullying, job stress, self-esteem, Determine the degree of exhaustion and intention to work.
- Bullying, job stress, self-esteem, Analyze the difference between exhaustion and intention to work.
- Bullying, job stress, self-esteem, Identify the correlation between burnout and intention to work.
- Identify the relevant factors affecting the intention to work.

Research Method

1. Research Design

This study aimed at bullying strength, job stress, self-esteem, and the like in the workplace of university hospital nurses. This is a descriptive correlation study analyzing exhaustion and intention to work.

2. Research Subject

This study consists of 3 university hospitals located in Seoul and Incheon it was targeted at nurses working in the hospital. After obtaining permission from the doctor, visit the nursing unit and explain the research purpose After that, a nurse who voluntarily agreed to this study was selected as the subject of the study. For the analysis of the appropriate number of targets using the G*Power 3.1.2 program. The significance level required for multiple regression analysis is .05, power of 90%, and effect. When .15 and 10 independent variables were used, the appropriate number of samples was 147. A total of 240 people were included in the study considering the dropout rate of 20%, and the final as a result, 229 patients were analyzed.

3. Research Tools

The research tool used a structured questionnaire and the characteristics of the questionnaire were the general characteristics of the patient. 16 question, bullying in the workplace 22 questions, job stress 9 question, Self-esteem 10 question, exhaustion 22 question, intention to serve 6 Gun into question 85It consisted of questions.

1) Bullying in the workplace

Einarsen, Hole and Notelaers (17) The tools of the NAQ (The Negative Acts Questionnaire, NAQ) e-mail the NAQ-R revised to English version by Einarsen et al. Used with permission NAQ-R has 12 questions related to personal harassment (2, 5, 6, 7, 8, 11, 12, 13, 14, 17, 18, 20) For example,'My routine in relation to this, I have been humiliated or laughed at. 'She was yelling at me or suddenly getting angry.' Has repeatedly pointed tomy mistakes.' The 5 questions (1, 3, 4, 16, 21) related to unrelated bullying can be answered in the workplace. I've never had a lot of work.' 5 questions related to threats such as threats such as that you have never given information (9, 10, 15, 19, 22) Use'welfare benefits (vacation, sick leave, parental leave) I've been pressured to keep myself from losing" I've been threatened by sun, push, and road blocking." A total of 22 items was used as a 5-point scale. None in the past 6 months 1 Points, less than once a month 2 points, once a month precision 3 points, per week measured at 4 points, 5 points almost every day. It means that you have experienced more static behavior per tool development Poem Cronbach's α was .93, and in this study Cronbach's α was It was .95.

2) Job stress

Job stress is physiological, psychological, social It is a tool developed by Parker and DeCotiis [18] in a state where they feel burdened enough to receive enemy disabilities. For example,'I get tired easily because of work',I sometimes feel annoyed by the psychological pressure on the job',I feel nervous because of work many times." The higher the score on a 5-point scale, the more it means that the tress degree is high. Cronbach's α at the time of tool development was .91 and Cronbach's α in this study was .93.

3) Self-esteem

In this study, the self-esteem of Rosenberg. Rosenberg Self-Esteem Scale developed, and then developed by Jon measurements were made using a refined tool. This tool is a positive self-zone Consists of 5 questions of aggravation and 5 items of negative self-esteem it is done. The response to a positive question on the Likert 4-point scale is' said'It's not like that' (1 point) to'Very good' (5 points), negative Inverse coding when scoring responses to questions (2, 5, 6, 8, 9) therefore, the higher the score, the higher the level of self-esteem.

Degree at the time of the development of the sphere, the reliability Cronbach's α was .92, and in this study the reliability of the tool Cronbach's α was .87.

4) Burnout

Exhausted Maslach and Jackson Developed by MBI (Maslach Burnout Inventory) by Choi Sphere was used. MBI is emotional according to the aspect of exhaustion experienced as the three sub-factors of red depletion, dehumanization and self-deprivation Consists of. MBI has 9 emotional exhaustion, 5 dehumanization and the self-fulfillment was measured on a scale of 7 out of 22 items out of 8 items. Degree at the time of old development, Cronbach's α was .98, and in this study, Cronbach's α was .93.

5) Retention

The job intention stops the nurse from looking for another new job refers to the intention to continue or stay in the current nursing profession in order to measure the intention of a nurse to work in the city, Cowin Developed nurse intention measurement tool (Nurses Retention Index) . This tool consists of 6 questions lost and doubled from "very not" to 8" the higher the score on the established 8-point scale of Likert, the intention of the nurse It means high. Reliability of tools at the time of development Cronbach's α was .97 [4], and Cronbach's α in this study was .88.

4. Datta Coleection

The nursing visit unit directly after obtaining permission from the nursing department for each hospital After explaining the purpose of the research, the co-researcher visited the nursing unit for the volunteers who voluntarily participated, and visited the co-researcher to explain the purpose and purpose of the study. After receiving the research agreement in writing, the questionnaire was distributed. Researcher's hospital is excluded it was stated that participation was based on the subject's voluntary will during the course of the survey, the remainder of the questionnaire was maintained, the questionnaire could be decided by the target person, and the respondents were not forced to respond 20 minutes.

Data collection period is from March 7, 2016 3 it was until the 30th of the month and a total of 240 questionnaires were distributed and 240 copies. Recovered to get 100% response ratethe response rate was obtained it is difficult to use for analysis because there are many unanswered items in the questionnaire 11 Finally except wealth 229 Used for additional analysis.

5. Data Analysis

The collected data are analyzed using SPSS/WIN 18.0 program

- General characteristics of the study subjects, bullying, job duties in the workplace, Stress, self-esteem, burnout, and degree of intention to work are technical skills it was analyzed using a system
- Cronbach's α value was used as the reliability of the research tool.
- Target bullying, job stress, and self-esteem in the workplace the degree of perception, exhaustion, and intention to work was analyzed by means of the average and standard deviation it was.
- The difference in job intention according to the general characteristics of the subject is one-time confirmed by one-way ANOVA and t-test it was analyzed by Scheffe' post-test.
- Bullying in the workplace, job stress, self-esteem, small. Pearson correlation is correlated with job intention it was analyzed by coefficient.
- The hierarchical regression is a related factor affecting the intention to work (Hierarchical multiple regression) was performed.

6. Ethical considerations

For the ethical consideration of the subjects before the start of the study, the clinical trial review committee of the university the researcher belongs to (Institutional Review Board) a research plan for the purpose and progress of the study was submitted to the deliberation result (approval number:IRB No, RB NO: 104178-201512-HRZZ-219-01) Participants are aimed at research

The collected data will be used for academic purposes only, and written consent has been given to nurses who have agreed to participate. Protection of personal information, confidentiality that it is not used for research purposes during the study, it was announced in writing that the study could be voluntarily refused or withdrawn at any time, and the matters stipulated in the Act on Bioethics and Safety were additionally announced

Result

1. Characteristics of research subjects

The subjects of this study are shown in Table 1. Gender is 227 women (99.1%), and the age of 21-29 was 107 (46.7%). The average age was 32.9 years. 139 unmarried (60.7%) married the final academic background was the highest with 147 bachelors (64.2%). The school responded that there were 102 (44.5%). Department of Internal Medicine 53 patients (30.1%) and 69 surgeons (33.1%) were the most. Job title the number of general nurses was 183 (79.9%), and the annual salary was 4,001. 118 people (51.5%) or more were the highest, and health status was the highest. 124 people were the most, with 54.1%. The total number of years worked is more than 10 years 82 People (35.8%) averaged 10.1 years. Current work experience more than 5 years 58 (25.4%) had an average of 4.27 years. New nurse in the current ward the number of people was 1-2 (88) (38.4%), and the average number of new nurses the number was 3.34. The number of beds was 158 (69%) for 500 to 1,000 beds. the most frequent and painful experiences were 11 nurses (4.8%), 21 doctors People (9.2%) seconds bullying experience 14 (6.1%) were bullying and 6 (2.6%) were harassed.

2. Bullying in the workplace, job stress, self-esteem, degree of exhaustion and intention to work.

Bullying, job stress, self-esteem, Table 2 shows the degree of exhaustion and intention to work. Drugs in the subject's workplace now bullying is 1.49±0.56 based on 5 points, and personal bullying is 1.52±0.63, threat-related bullying was 1.22±0.45 points, up the unrelated bullying was highest at 1.68±0.69. In individual questions Someone has never given me information that affects my job C'(2.06±1.03),'Someone yelled at me or suddenly got angry I've paid'(1.78±0.91) Or laughed at it" (1.69±0.90). All. The job stress was 3.46±0.83 on a 5-point scale, and "I want to get enough rest with mental fatigue" (4.09±0.92), "Easy I get tired" (3.76±0.94), "When I feel nervous because of work High" (3.72±0.98). Self-esteem is based on 5 points it was 3.51±0.54,'I sometimes feel that I'm really useless (3.85±0.88),'I am someone who is at least as valuable as I am to others. I feel it' (3.75±0.64). exhaustion is rated based on 6 points emotion was 3.11±0.75 points, and emotional consumption was highest at 4.27±1.17, I become exhausted at the end of the day' (5.44±1.45), When I wake up in the morning and think I have to work today, a' (5.01±1.63),'I felt I was exhausted mentally a' (4.93±1.49). Job intention is 4.89± based on 8 points it was 1.29, i'am willing to continue to be a nurse for the time being. Everything (5.62±1.44), I will continue to work as a nurse for the time being. The average value was highest in the order of (5.50±1.35).

3. Bullying in the workplace, job stress, self-esteem, Analysis of differences between exhaustion and intention to work.

Bullying, job stress, and weakness in the workplace according to general characteristics Table 3 shows the difference in sub-zone esteem, exhaustion, and intention to serve. General special Gender, religion, work department, salary and current work experience among gender are significantly different There was not. Bullying in the workplace has a significant difference in the number of beds. Appeared to be. The number of beds is more than 1,500 beds (1.78±0.82), 1,001 to 1,500 (1.52±0.52), 500 to 1,000 beds (1.44±0.49) 1,500 or more beds and 500 to 1,000 beds There were significant differences, and the larger the number of beds, the weaker the workplace. The average value of dropping was higher ($F=4.62$, $p=.011$). Job stress in age, marital status, educational background, current position, health status, years worked,there was a statistically significan difference

Table 1. General Characteristics of Participants (*N* = 229)

Characteristics	Categories	n (%)	M ± SD	Range
Gender	Female	227 (99.1)		
	Male	2 (0.9)		
Age (year)	21~29	107 (46.7)	32.87 ± 8.51	22~56 years
	30~39	71 (31.0)		
	≥ 40	51 (22.3)		
Marital status	Married	87 (38.0)		
	Unmarried	139 (60.7)		
	Other	3 (1.3)		
Education level	Junior college	43 (18.8)		
	University	147 (64.2)		
	Graduate school	39 (17.0)		
Religion	Yes	102 (44.5)		
	No	127 (55.5)		
Work unit	Medical unit	53 (23.1)		
	Surgical unit	69 (30.2)		
	Special and other	107 (46.7)		
Current position	Staff nurse	183 (79.9)		
	Charge nurse	29 (12.7)		
	≥ Head master	17 (7.4)		
Yearly income (10,000 won)	2,000 ~ 3,000	24 (10.5)		
	3,001 ~ 4,000	87 (38.0)		
	≥ 4,000	118 (51.5)		
Health status	Poor	50 (21.9)		
	Moderate	124 (54.1)		
	Good	55 (24.0)		
Total number of years in nursing (year)	< 1	12 (5.2)	10.13 ± 8.78	3 ~ 409 months
	1 ~ <3	43 (18.8)		
	3 ~ <5	34 (14.8)		
	5 ~ <10	58 (25.4)		
	≥ 10	82 (35.8)		
Total number of years in present position (year)	< 1	43 (18.8)	4.27 ± 4.78	1 ~ 380 months
	1 ~ <3	88 (38.4)		
	3 ~ <5	60 (26.2)		
	≥ 5	53 (23.2)		
Number of new nurses	0	28 (12.2)	3.34 ± 3.49	0 ~ 25
	1 ~ 2	88 (38.4)		
	3 ~ 4	60 (26.2)		
	≥ 5	53 (23.2)		
Number of beds	500 ~ 1,000	158 (69.0)		
	1,001 ~1,500	43 (18.8)		
	≥1,501	28 (12.2)		
Type of bullies	Nurse	11 (4.8)		
	Doctor	21 (9.2)		
Builled while at school	Yes	14 (6.1)		
	No	215 (93.9)		
Experience with bullying in school priodes	Yes	6 (2.6)		
	No	223 (97.4)		

Table 2. Means and Correlations for Variables (N=229)

Variables	M ± SD	Bullying	Job Stress	Self-esteem	Burnout	Nurse's intention
		r (p)	r (p)	r (p)	r (p)	r (p)
Bullying	1.49 ± 0.56	1				
Personal related bullying	1.52 ± 0.63					
Work-related bullying	1.68 ± 0.69					
Intimidation related bullying	1.22 ± 0.45					
Job stress	3.46 ± 0.83	.43 (<.001)	1			
Self-esteem	3.51 ± 0.54	-.38(<.001)	-.51(<.001)	1		
Burnout	3.11 ± 0.75	.41(<.001)	.73 (<.001)	-31 (<.001)	1	
Emotional exhaustion	4.27 ± 1.17					
Depersonalization	3.42 ± 1.25					
Lpw personal accomplishment	1.39 ± 0.81					
Nurse's intention to stay in job	4.89 ± 1.29	-.23(.001)	-.39(<.001)	-.38 (<.001)	-.49 (<.001)	1

in the number of new nurses and the number of hospital beds. Appeared. Age is 21-29 years old (3.64±0.75), 30-39 years old (3.46±0.84), 40 years old or older (3.09±0.85) Although it was seen, the results of post-analysis showed that they were between 21 and 29 years of age, 40 and older, and between 30 and 39 years of age. There was a difference between the ages of 40 and older (F=7.91, p<.001). In marriage The unmarried (3.57±0.82) was higher than the married (3.29±0.82) (t=6.34, p=.013). Education is a college graduate (3.60±0.78), a four-year college graduate (3.54±0.77), Higher than graduate school (3.01±0.94), showing significant difference. As a result of analysis, there was a difference between a college graduate and a four-year graduation. There was a difference between graduation and graduate school (F=7.37, p=.001). Job title General nurse (3.58±0.78), responsible nurse (3.20±0.74), nursing nurse As shown in the order of abnormality (2.61±0.88), the post-analysis results showed that the general nurse, There was a significant difference between the responsible and the senior nurses. The higher the level, the lower the average value of job stress (F=13.53, p<.001). Poor health (3.93±0.75), moderate (3.52±)0.67), but in the case of good (2.89±0.90), there was a significant difference. (F=26.34, p<.001) Post-analysis results showed poor health There was also a significant difference between right and normal, and and above is between the general nurse (3.47±00.53) and the nursing nurse (3.93±0.50) There was a significant difference (F=6.27, p=.002), and the health condition was not good. Case (3.47±0.53) and normal (3.60±0.55), normal (3.60±0.55) and good Showed a significant difference with the case (3.93±0.50) (F=13.45, p<.001). As for the number of beds, there was a significant difference in the results of post-mortem analysis (F=3.64, p=.28) there was not.

Exhaustion according to general characteristics includes age, marital status, education level, job title, There were significant differences in health status, total work experience, and disease constant. Age silver was the highest in 21-29 years old, 21-29 years old (3.29±0.68), 30~39 years old (3.07±0.70), 40 years old or older (2.79±0.85), as a result of the post-hoc analysis, the age of 21 to 29 was statistically significant in those over 40 There was a difference (F=3.81, p=.024). The marriage status is unmarried (3.25±0.6) This was higher than married (2.88±0.80) (t=13.97, p<.001). Education degree Graduated from junior college (3.21±0.61), graduated from 4 years (3.20±0.72), graduate school Significant differences were found in the order of abnormality (2.68±0.86). Graduated from the College of Science and Technology, graduated from the 4-year college, graduated from the 4-year college There was a significant difference (F=8.43, p<.001). Between positions Nurses

normal and good cases. working years are 1 year or more and 3 years or less (3.45±0.78) and 10 years or more (3.18) There was a significant difference at ±0.88) (F=4.73, p=.001), and new nursing in the shooter, 1~2 people (3.54) than the ward without new (2.91±0.80) ±0.74), 3-4 (3.49±0.92) wards have high job stress (F=5.06, p=.002).

Self-esteem is age, education, position, health status, number of beds and existence the age was 21~29 years (3.45±0.55) and there was a significant difference between the age of 40 and over (3.68±0.50) (F=3.41, p=.035) and the degree of education was 4 years (3.47±0.53) and graduate school or higher there was a significant difference at (3.72±0.55) (F=3.34, p=.037), had the highest exhaustion, general nurses (3.24±0.68), liability Nurses (2.83±0.84) and nursing abnormalities (2.22±0.64) were significant. There was a difference, and as a result of the post analysis, the number of general nurses and responsible nurses there was a significant difference from the nurse abnormal group (F=11.26, p<.001).

Poor health (3.49±0.63), Moderate (3.18±0.68), Good Status (2.63±0.76) showed a significant difference in the order, and post-analysis The difference between normal and poor health is significant difference between normal and good health. This was shown (F=21.40, p<.001). Total work experience is more than 1 year and 3 years Less than (3.13±0.74) was the highest, and after the

Table 3. Differences in the Bullying, Job stress, Self-esteem, Burnout, and Nurse's intention by General Characteristics
(N=229)

Characteristics	Categories	Bullying		Job stress		Self-esteem		Burnout		Nurse's intention	
		MD ±SD	t or F (*p*)	MD ±SD	t or F (*p*)	MD ±SD	t or F (*p*)	MD ±SD	t or F (*p*)	MD ±SD	t or F (*p*)
Age (year)	21~29[a]	1.53±0.61	0.64	3.64±0.75	7.91	3.45±0.55	3.41	3.29±0.68	3.81	4.53±1.11	11.42
	30~39[a]	1.48±0.57	(.531)	3.46±0.84	(<.001)	3.51±0.54	(.035)	3.07±0.70	.024	4.97±1.24	(<.001)
	≥ 40[b]	1.43±0.41		3.09±0.85	a,b>c	3.68±0.50	a c	2.79±0.85	a>c	5.51±1.44	a<c
Marital status	Married[a]	1.46±0.47	0.38	3.29±0.82	6.54	3.61±0.55	1.84	2.88±0.80	13.97	5.47±1.35	33.03
	Unmarried[b]	1.51±0.60	(.503)	3.57±0.82	(.013)	3.47±0.53	(.039)	3.25±0.68	(<.001)	4.53±1.10	(<.001)
Educational level	Junior college[a]	1.46±0.52	0.69	3.60±0.78	7.37	3.50±0.53	3.34	3.21±0.61	8.43	4.81±1.06	9.12
	University[b]	1.52±0.60	(.503)	3.54±0.77	(.001)	3.47±0.53	(0.37)	3.20±0.72	(<.001)	4.70±1.24	(<.001)
	Graduate school[c]	1.42±0.40		3.01±0.94	a, b>c	3.72±0.55	b<c	2.68±0.86	a, b>c	5.66±1.42	b<c
Current position	Staff nurse[a]	1.51±0.57	1.10	3.58±0.78	13.53	3.47±0.53	6.27	3.24±0.68	19.26	4.67±1.14	9.25
	Charge nurse[b]	1.50±0.58	(.336)	3.20±0.74	(<.001)	3.60±0.55	(.002)	2.83±0.84	(<.001)	5.47±1.48	(<.001)
	≥ Head nurse[c]	1.30±0.33		2.61±0.88	a, b>c	3.93±0.50	a<c	2.22±0.64	a, b>c	6.27±1.29	a<b, c
Health status	Poor[a]	1.71±0.80	5.15	3.93±0.75	26.34	3.27±0.57	13.43	3.49±0.63	21.40	4.24±1.24	13.39
	Moderate[b]	1.45±0.46	(.007)	3.52±0.67	(<.001)	3.50±0.50	(<.001)	3.18±0.68	(<.001)	4.89±1.17	(<.001)
	Good[c]	1.40±0.42		2.89±0.90	a, b>c	3.79±0.49	a<b<c	2.63±0.76	a<b<c	5.48±1.31	a, b<c
Total number of years in nursing (year	<1[a]	1.29±0.39	1.39	3.45±0.78	4.73	3.72±0.56	1.80	3.13±0.74	5.01	5.03±1.14	6.91
	1~<3[b]	1.63±0.70	(.240)	3.79±0.72	(.001)	3.35±0.56	(.129)	3.38±0.55	.001	4.32±1.03	(<.001)
	3~<5[c]	1.50±0.51		3.59±0.78	b>e	3.48±0.56		3.36±0.77	c>e	4.42±1.23	b<e
	5~<10[d]	1.51±0.59		3.55±0.76		3.53±0.43		3.12±0.60		4.85±1.11	
	≥10[e]	1.43±0.47		3.18±0.88		3.59±0.58		2.86±0.85		5.38±1.38	
Number of new nurses	0[a]	1.45±0.50	0.57	2.91±0.80	5.06	3.59±0.58	0.29	2.85±0.86	1.49	5.41±1.37	2.95
	1~2[b]	1.45±0.55	(.639)	3.54±0.74	(.002)	3.49±0.50	(.834)	3.18±0.69	.218	4.73±1.33	.033
	3~4[c]	1.50±0.60		3.49±0.92	a<b, c	3.50±0.53		3.09±0.70		4.70±1.16	
	≥5[d]	1.57±0.54		3.58±0.77		3.54±0.61		3.16±0.83		5.09±1.23	

Number of beds	500~1,000	1.44±0.49	4.62	3.37±0.86	3.27	3.58±0.56	3.64	3.03±0.76	3.17	5.08±1.28	6.56
	1,001~1,500	1.52±0.52	(.011)	3.59±0.67	(.040)	3.37±0.47	(.028)	3.20±0.67	.044	4.53±1.24	.002
	≥1,501	1.78±0.82	a<c	3.76±0.80		3.39±0.46		3.46±0.79		4.32±1.11	

a,b,c,d,e = Scheffé test.

analysis, between 3 and 5 years (3.36±0.77) and over 10 years (2.86±0.85) showed significant differences (F=5.01, p=.001). The number of beds is 1,501 or more (3.46±0.79), 1,001 Significant differences in the order of ~1,500 (3.20±0.67) and 500~1,000 (3.03±0.76) However, there was no difference in post-analysis results (F=3.17, p=.044).

There were significant differences in position, health status, total work experience, new number and disease constant. As for the age, the post-analysis result showed that the age of 21-29 years (4.53±1.11) was 40 years or older. Phase (5.51±1.44) showed a statistically significant difference (F=11.42, p<.001), married status (5.47±1.35) than married (4.53±1.10) Higher (t=33.03, p<.001). Education degree is 4 years after analysis Significant difference between graduation (4.70±1.24) and graduate school or higher (5.66±1.42) (F=9.12, p<.001). In posts, the results of post-analysis were general Nurses (4.67±1.14) are responsible nurses (5.47±1.48) and senior nurses (6.27) ±1.29) showed a significant difference (F=9.25, p<.001). Health status Poor (4.24±1.24), Normal (4.89±1.17), Good (5.48±1.31) Showed a significant difference, and the post-analysis resulted in poor health and Normally, there was a significant difference from good health (F=13.39, p<.001). The total work experience was 1 to 3 years (5.05±1.14) and 10 after analysis. Significant differences were observed in more than 5 years (5.38±1.38) (F=6.91, p<.001). The number of new nurses (F=2.95, p=.033) and the number of hospital beds (F=6.56, p=.002) are used. There was no difference in post-analysis results.

4. Target bullying, job stress, and self esteem the workplace correlation between respect, exhaustion and intention to work

Bullying, job stress, self-esteem Table 2 shows the correlation between exhaustion and intention to work. Analysis, Inconvenience in employment, bullying in the workplace, job stress, exhaustion Self-esteem showed a positive correlation. Office In correlation with intention, exhaustion (r=.49, p<.001), job stress S (r=.39, p<.001), self-esteem (r=.38, p<.001) abbreviation in the workplace bullying (r=-.23, p=.001).

5. Related factors affecting the intention to work hierarchical regression of factors affecting the intention to work

It was set as a hierarchical multiple regression. General special Adult age, education, current position, health status, bullying in the workplace, job duties employment intention, the outcome variable for stress, self-esteem, and exhaustion the results of the hierarchical regression analysis are shown in Table 4, and the assumptions of the regression model are The test results are as follows.

First the result of examining the residual plot for equal dispersion test, etc. Dispersibility was confirmed. Second, to verify the independence of the residuals, Durbin As a result of checking the Watson statistics, the error is 2.153. There was no autocorrelation. For reference, the Durbin Watson statistic is close to zero. The more we cried, the more positive correlation, and the closer to 4, the more negative correlation. Indicates that when it is close to 2, it is uncorrelated see. Third, as a result of checking multicollinearity between independent variables, Variance Inflation Factor (VIF) between 1.004 and 2.503 There was no multicollinearity. Normal if VIF value is less than 10 Therefore, it is considered that there is no multicollinearity therefore, this study model is a regression All the assumptions for seats were met.

Model 1, which contained only four control variables, changed employment intention. 17% (F=16.37, p<.001) was explained. Age (β=.26), education (β=.14),

job title (β=.25), and health (β=.22) It appeared to have a significant effect on. Bullying in the workplace Model 2, including power, additionally explains the intention to work 2% (F=42.50, p<.001), and Model 3 including job stress 3% additional explanation of the figure, model including self-esteem 4 explained 3% additionally (F=13.74, p<.001), and finally, Model 5 including exhaustion explained 4% additionally, resulting in a change in employment intention. 29% of the respondents F=14.25) p<.001). In Model 5, the control variables were

Table 4. Results of Hierarchical Regression on Nurse's Intention to Stay in Job

Variables	Model 1	Model 2	Model 3	Model 4	Model
	β (*p*)	β (*p*)	β (*p*)	β (*p*)	β (*p*)
Age (year)	.26 (<.001)	.25 (<.001)	.19 (.002)	19 (.002)	.16 (<.001)
Education level	.14 (.035)	.14 (.041)	.11 (.101)	.10 (.123)	.09 (.161)
Current position	.25 (<.001)	.24 (<.001)	.20 (.003)	.19 (.003)	.16 (.017)
Health status	.22 (.001)	.18 (.004)	.14 (.028)	.12 (.048)	.12 (.048)
Bullying		-.17 (.007)	-.08 (.209)	-.04 (.530)	-.01 (.844)
Job stress			.23 (.001)	.16 (.034)	.02 (.832)
Self-esteem				.20 (.004)	.14 (.050)
Burnout					-.32 (<.001)
F (*p*)	16.37 (<.001)	16.37 (<.001)	14.32 (<.001)	13.74 (<.001)	14.25 (<.001)
R^2	.18	.18	.24	.27	.31
Adjusted R^2	.17	.17	.22	.25	.29

age (β=.16) and position (β=.16), health (β=.12) affected, self-esteem (β=.14) and cattle Gene (β=-.32) was found to have a significant effect on employment intention. Dubin Watson's figure is 2.153, which goes to 2. Therefore, it can be regarded as independent, and the normality and equal dispersion of the residuals It was possible to confirm the castle, and as a result of confirming the multicollinearity, Since the number (VIF) is between 1.004 and 2.503, the multi-hole There were no variables in which linearity was a problem. In other words, the older you are, the current position The higher, the better the health condition, the higher the self-esteem, It was found that the lower the exhaustion, the more it affected job intention.

Argument

This study aimed at bullying, job swapping in the workplace of nurses at university hospitals. self-esteem and exhaustion examined the relationship study that it could be phosphorus. So-Jin is an underdog in the workplace a positive correlation between bullying and job stress was negative with self-esteem there was a correlation, and these findings were studied by Shin et al. Similar results were obtained in Soo Jin is short of nurses and labor intensive and pregnancy protection of women due to childbirth cannot be achieved, nurses a vicious circle of increased risk of bullying in the workplace since it can be repeated as bullying of the weak in the intestine, lowering job stress, and self-zone of the nurse Increase the sense of consciousness to ensure the human rights and labor rights of nurses and to improve patient safety policy support in the direction of keeping is necessary.

Job stress averaged 3.46±0.83 out of 5, same tool In the study of Choi and Kim using, it was lower than 3.69 points. However, considering that the score is higher than the average, the two study subjects as a hospital, the patient's severity is high, nursing needs are diversified, and Ryokan certification, international certification (Joint Commission International, JCI) Certification and

between job intention Post nurse's healthy working environment and nurse maintenance strategy in hospital let's provide basic data to establish the discussion as follows is as follows.

Bullying in the workplace is positively correlated with job stress and exhaustion. Relationship, showing a negative correlation with self-esteem and intention to serve Bullying of the weak in the workplace has been steadily in nursing since 2010. The subject being studied is a nurse who has been bullied in the workplace. Low mental health and mental health compared to peers who have not been harassed Supports research findings that have a major impact on emotional exhaustion. Low self-esteem has a significant effect on workplace bullying. Individuals with low self-esteem as a beating factor attack others Very vulnerable to people who experience bullying in the workplace this study supports the findings that this can be done with iglesias in a study of nurses in Vallejo et al, in the workplace weak bullying is a predictive variable that lowers nurse self-esteem it was similar to the Total Quality Management (TQM) as such, continuous quality management is emphasized, Job stress for nurses who need to complete nursing tasks Is believed to increase. Jobs with high job stress Satisfaction is lowered, so the intention to move is higher it is also consistent with the findings that the intention to work is low. Job boss Tress has a positive and negative effect on the multidimensional aspect of work performance. Having two sides, Cavanaugh et al have a work-related stress The stress factor is that all stress acts as a barrier to personal growth. Challenge stress factors are high work load, time pressure stimuli such as gourds and high levels of accountability are associated with potential stress. If you overcome because it includes, take it as an opportunity for personal growth He said it could be. Job stress to some extent stress Focus on the positive side of the circle and overcome by personal growth It is thought that the intention to turn cotton will decrease and increase the intention to work.

The result of regression analysis, it is a factor of influencing job intention, current position, health status, self-esteem and exhaustion were significant it was selected as a variable and the explanatory power of intention to work by the variables 29%. These results indicate that the longer you stay in the hospital, The higher the position, the higher the degree of education, the longer the desired tenure The more, the higher the intention to be employed when there was no impulse to change jobs. It was similar to the study by Han Lee, Jo and Son. Prior research abroad Edo. The older the nurse, the higher the intention to work. It has been reported that as you get older, your career and work skills Lago, and sometimes the status in the working environment increases. It is considered to be related to the transition. However, the turnover rate is new Considering the high level of death, the shortage of nurses is not guaranteed for senior nurses. I don't have time and time to take care of the boss, and new nurses Reprimanded by senior for failing to adapt to business If you do, you will be placed in a negative situation of bullying in the workplace, You need to focus on the nurses in order to improve motivation and intention to work. It is said that there is a need to provide a mentoring and clinical support. Health status was related to job stress, self-esteem, exhaustion and employment intention. There was a significant difference, but the worse the health, the higher the exhaustion. The exhaustion of the stress hormone cortisol Increased sleep disorders, depression, anxiety, cardiovascular disease, smoking and alcohol. We have seen studies that indicate that sick leave or productivity decreases will occur. Research is supported.

The self-esteem is a predictor of job intention previous domestic studies that studied relationships were difficult to find organization - oriented self-esteem serves as a medium of job intention the results were reported as under organization self-esteem is an important part of an organization's ability and the extent to which they believe it is valuable be precious, competent and trust and respect yourself it was studied that the higher intention to work higher the job intention follow the managers' intentions may increase depending on the manager's ability true leadership self-esteem and intention to serve

as a manager respected by Saga further research on the relationship with is thought to be necessary. Exhaustion also increased the explanation power of intention to work by 4%. Job intention is job satisfaction, intimacy and cooperation among colleagues, and organization Immersion, exhaustion, personal characteristics, managerial leadership and support, and other confirmations and tourangeau, it was similar to the results of Cranely therefore, the intention to work in order to win, the individual characteristics and organizational characteristics the conformity between the characteristics and organizational characteristics or job characteristics is the basis of all members. Personal-organizational fitness and personal occupation because it affects help and behavior It is necessary to study further by introducing concepts such as fitness Contrary to Jin, it aims to improve the positive psychological capital of nurses. You need to find a way to go bad. Positive psychological capital is self-efficacy it is an integrated concept composed of ability, optimism, hope, and resilience. about the relationship between each sub-concept and the sub-concept of burnout research needs to provide concrete grounds.

The significance of this study was to identify variables related to intention to serve what can increase job intention is to maintain nursing personnel and lack of nurses about the quality of patient care and the improvement of patient safety it is significant that barriers can be reduced. Further organizational Bullying, job stress, exhaustion in the workplace as factors and personal factors decrease, and increase self-esteem to increase job intention.

Conclusion

Bullying in the workplace affecting job intention to determine the relationship between strength, job stress, self-esteem and exhaustion it was intention to work and bullying in the workplace, job stress, exhaustion showed negative correlation and positive correlation with self-esteem in general, age, current position, and health statushave an impact is a variable, and increasing self-esteem and reducing exhaustion it is the key to raising the degree.

Based on this study, suggesting ways to increase employment intention are as follows Same as First, through the healthy working environment campaign, the weak in the workplace need to develop a management program to prevent cases such as robbing and identify and eliminate organizational factors that allow this behavior it takes effort. Second, moderate job stress is personality. It helps the intestine, but heavy job stress has a high intention to change jobs so that it can reduce the workload and increase the value of the work it is necessary to improve the working environment. Third, self-esteem is related to intention to serve not only does it play an important mediating role, but also the individual and organization University education to increase self-esteem as it affects the body people who respect and value themselves from the process should be educated to think of, and the social perception of nurses it is necessary to create a culture capable of raising the level and work even in hospital organizations promote appropriate education such as shops and seminars, and it is important for hospitals and countries so that it can be used as a resource i need a circle

Positive variables rather than negative variables affecting job intention further studies on the need to promote the interaction between the two variables can act as an independent variable or a dependent variable suggest research to confirm.

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12. ***Do Low Self-Esteem and High Stress Lead to Burnout Among HealthCare Workers? Evidence From a Tertiary Hospital in Bangalore, India***

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Original Article

Do Low Self-Esteem and High Stress Lead to Burnout Among Health-Care Workers? Evidence From a Tertiary Hospital in Bangalore, India

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ABSTRACT

Background: Low self-esteem can be an issue among health-care workers due to the hierarchical medical system. Health-care workers are also in a high pressure environment that can lead to stress and burnout. This study was conducted to estimate the proportion of health-care workers with low self-esteem, high stress, and burnout and the factors associated with these in a private hospital in Bangalore city.
Methods: This cross-sectional study included a random sample of health-care workers of various cadres – doctors, nurses, nursing aides, technicians, and workers in ancillary departments such as laundry, dietary, central sterile supply department, and pharmacy, with probability proportional to size. Rosenberg Scale for Self-esteem, Cohen's Perceived Stress Scale, and Shirom–Melamed Burnout Measure were used as study tools.
Results: Among the 306 health-care workers, there were high levels of low self-esteem (48.4%), stress (38.6%), and burnout (48.7%), with the lowest levels being among doctors. Those aged younger than 30 years had significantly lower self-esteem and greater stress.
Conclusions: Health-care workers with low self-esteem were nearly thrice more likely to suffer high stress, Odds Ratio (OR) = 2.84 (1.36–5.92), and those who were stressed had more than three times higher chance of experiencing burnout, OR = 3.6 (2.02–6.55). Path analysis showed that low self-esteem among health-care workers had a direct effect on burnout, as well as an indirect effect through stress (mediator variable). This study indicates the need for screening and counseling for low self-esteem, stress, and burnout as part of a periodic medical examination of all cadres of health workers.
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1. Introduction

Health-care workers are constantly in an environment that predisposes to stress and burnout, and depending on one's job description and position in the "medical hierarchy", even low self-esteem can be an issue. The medical profession is in the paradoxical position of needing as much support as any other group of professionals, if not more, but is generally getting much less. Burnout among health-care workers can happen, given the high-pressure environment in which they must make potentially life-saving, and almost always life-altering, choices on a constant basis [1].

Self-esteem refers to the confidence in one's own worth or abilities [2]. A high level of self-esteem is linked to trusting one's thinking and judgment and decision-making. It helps to create more effective interpersonal and work relationships and contributes to improving the work environment [3]. Poor self-esteem leads to overly compliant or rebellious behavior, making the work environment unpleasant and decreasing productivity, further leading to mental health issues [4].

Stress in the workplace is defined as "the response people have when presented with work demands and pressures that are not matched to their knowledge and abilities and which challenge their ability to cope" [5]. Some amount of pressure at the workplace is unavoidable due to the demands of the contemporary work environment. However, when that pressure becomes excessive or otherwise unmanageable, it leads to stress. Stress can damage an employee's health and work performance.

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Burnout is characterized by emotional exhaustion, feelings of detachment (depersonalization), and a sense of low personal accomplishment. Exposure to patients with poor prognosis, high workload, poor interpersonal relationships, and role ambiguity can lead to burnout [6]. Burnout among health-care workers has garnered significant attention because of the negative impact it renders on patient care [7]. High burnout levels among health-care workers may result in medical errors, job attrition, lack of professionalism, and even substance abuse [8].

Low self-esteem and high stress levels can be predictors of burnout at the workplace and employees therefore need to be screened for all three, in an effort to improve productivity at work [9].

Most of the research in the area of self-esteem, stress, and burnout among health-care workers has been carried out among doctors and nurses in developed and Western countries. There is a paucity of data from Asian and developing countries, as well as data from other cadre of health-care workers such as nursing aides, technicians, and employees in ancillary departments. Considering the sheer number of patients and the immense workload in India, this study was conducted to estimate the proportion of health-care workers with low self-esteem, stress, and burnout and the associated risk factors in a private hospital in Bangalore city. This would help design targeted interventions at the workplace to address these issues, thereby improving productivity and patient care.

2. Materials and methods

This was a cross-sectional study carried out in a large tertiary private missionary hospital in Bangalore city, in the south of India, with 1350 in-patient beds and an average of 2500 outpatient consultations per day. Institutional Ethics Committee approval was obtained before the commencement of the study. The study participants included health-care workers of various cadres, that is, doctors, nurses, nursing aides, technicians, and workers in ancillary departments such as laundry, dietary, central sterile supply department, and pharmacy. A sample size of 303 was calculated with 5% absolute precision and 95% confidence limits, based on a previous study among health-care workers in Jordan [10], which found a 27% prevalence of high stress. The prevalence of stress was considered for sample size calculation, as it gave the largest sample size as compared with using self-esteem or burnout. A list of all health-care workers in the hospital was obtained and using probability proportional to size, the required sample in each cadre was determined and selected randomly using a random number table. This list did not include interns, postgraduate medical students, student nurses, and student technicians.

Only health-care workers aged between 18 to 60 years who had completed at least one year of service in the hospital were included in the study. Those unwilling to participate and those who were not contactable even after 3 attempts were excluded from the study and a new participant was randomly selected as a replacement from the same cadre of workers. Written informed consent was obtained from the study participants before inclusion in the study.

Study participants were asked to complete a self-administered questionnaire which included sociodemographic, family, and employment details, as well as the following standardized scales:

Rosenberg Scale to assess self-esteem [11]

This is a 10-item questionnaire that assesses self-esteem. Each item is scored on a 4-point scale, with responses ranging from "strongly agree" (0) to "strongly disagree" (3). Positively worded items are reverse scored. Total scores are dichotomized, with scores less than 15 suggesting low self-esteem and scores of 15 and more suggesting high self-esteem.

Table 1
Various cadre of health-care workers included in the study N = 306

No.	Cadre of health-care workers	Total N (%)
1	Doctors	89 (29.1)
2	Nurses	113 (36.9)
3	Lab technicians	19 (6.2)
4	Nursing aides	62 (20.3)
5	Ancillary departments	
	Central sterile supply department	2 (0.7)
	Laundry	5 (1.7)
	Dietary	4 (1.2)
	Pharmacy	9 (2.9)
	Medicosocial work	3 (1.0)

Cohen's Perceived Stress Scale to assess stress [12,13]

This is a 10-item scale assessing perceived stress over the last one month. Each item is scored on a 5-point scale, with responses ranging from "never" (0) to "almost always" (4). Positively worded items are reverse scored. A participant with a score of 21 or more is considered to have high stress.

Shirom–Melamed Burnout Measure to assess burnout [14]

This is a 14-item scale assessing burnout at the workplace. Each item is scored on a 7-point scale, with responses ranging from "never/almost never" (1) to "always/almost always" (7). It assesses three dimensions of burnout namely physical fatigue (6 questions), emotional exhaustion (5 questions), and cognitive weariness (3 questions). The higher the total score, the greater is the level of burnout.

The questionnaire was translated and back translated into the local language to enable the various cadre of health-care workers to read and understand the questions and to participate in the study. Participants were given a choice to answer either the English or the Kannada version. The questionnaire was found to have acceptable internal reliability with a Cronbach α coefficient of 0.78.

The data collected were entered in Microsoft Excel and analyzed using (SPSS, IBM Statistical Package for Social Sciences, NY, USA, version 16). Sociodemographic, employment, and family data were analyzed using frequencies, proportions, means and standard deviation, and median. The outcome variables of self-esteem, stress, and burnout were studied for their association with various sociodemographic, employment, and family factors using the Chi-square test and Fischer exact test where applicable, as well as the Mann–Whitney *U* test and Kruskall–Wallis test for difference between median scores of the outcome variables. A p-value of <0.05 was considered as statistically significant. Significant factors were entered into a multiple logistic regression model to look at the various determinants of self-esteem, stress, and burnout. Path analysis was performed to check the hypothesis that low self-esteem leads to high stress, which in turn leads to burnout.

3. Results

Because data collection was performed simultaneously by three data collectors, the final sample of 306 slightly exceeded the required sample of 303, and it was decided to retain the data of the extra participants. Of the 306 subjects, 89 (29.1%) were doctors (junior residents and teaching faculty), 113 (36.9%) staff nurses, and 104 (34%) were nursing aides, technicians, and employees in ancillary departments – laundry, dietary, central sterile supply

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Table 2
Association of various sociodemographic and economic factors with self-esteem, stress, and burnout among health-care workers

Variable	Category	Total N = 306	Self-esteem			High stress			Burnout	
			High 158 (51.6)	Low 148 (48.4)	p value	Absent 188 (61.4)	Present 118 (38.6)	p value	Median (IQR)	p value
Age (in years)	≤30	246 (80.4)	118 (47.9)	128 (52.1)	**0.005**[a]	142 (57.7)	104 (42.3)	**0.004**[a]	24 (14–34.5)	0.18[c]
	31–50	41 (13.4)	26 (63.4)	15 (36.6)		29 (70.7)	12 (29.3)		23 (13–31)	
	>50	19 (6.2)	14 (73.7)	5 (26.3)		17 (89.5)	2 (10.5)		16 (9–33)	
Education	Up to PUC	58 (18.9)	28 (48.3)	30 (51.7)	**0.008**[b]	32 (55.2)	26 (44.8)	**0.006**[a]	23 (9–29)	**0.04**[c]
	General/lab degree	46 (15.1)	19 (41.3)	27 (58.7)		25 (56.5)	21 (43.5)		24.5 (15–39)	
	Diploma nursing	26 (8.5)	10 (38.5)	16 (61.5)		18 (69.2)	8 (30.8)		23 (9–29)	
	BSc Nursing	87 (28.4)	38 (43.7)	49 (56.3)		46 (52.9)	41 (47.1)		26 (16–38)	
	MBBS	22 (7.2)	15 (68.2)	7 (31.8)		14 (63.6)	8 (36.4)		21 (14–31)	
	MD/MS	67 (21.9)	48 (71.6)	19 (28.4)		53 (79.1)	14 (20.9)		21 (11–31)	
Cadre of health-care worker	Doctors	89 (29.1)	63 (70.8)	26 (29.2)	**<0.001**[a]	67 (75.3)	22 (24.7)	**0.006**[a]	21 (13–31)	**0.03**[c]
	Nurses	113 (36.9)	48 (42.4)	65 (57.6)		64 (56.6)	49 (43.4)		25 (15.5–37)	
	Others	104 (34.0)	47 (45.2)	57 (54.8)		57 (54.8)	47 (45.2)		24 (12–31)	
Socioeconomic status	Median per capita monthly income in USD (IQR)	306 (100)	250 (85–565)	102 (36–198)	0.13[c]	143 (72–477)	114 (71–246)	**0.01**[c]	Correlation coefficient r = −0.02	0.73[d]
Marital status	Married	168 (54.9)	98 (58.3)	70 (41.7)	**0.01**[a]	108 (64.3)	60 (35.7)	0.26[a]	23 (11–32)	**0.08**[c]
	Unmarried	138 (45.1)	60 (43.5)	78 (56.5)		80 (58.0)	58 (42.0)		24 (15–35)	

The numbers in parentheses are row percentages, except in the total column where they are column percentages. PUC = Pre-university college; MBBS = Bachelor of Medicine & Bachelor of Surgery; MD = Doctorate in Medicine; MS = Master in Surgery. Bold = statistically significant at p < 0.05.
[a] Chi-square test.
[b] Mann–Whitney U test.
[c] Kruskal–Wallis test.
[d] Spearman's Rank correlation.

Table 3
Association of high stress with low self-esteem

Variable	Category	Total N = 306	High stress		p value
			Yes 118 (38.6)	No 188 (61.4)	
Low self-esteem	Yes	148 (48.4)	82 (55.4)	66 (44.6)	**<0.001**[a]
	No	158 (51.6)	36 (22.8)	122 (77.2)	

The numbers in parentheses are row percentages, except in the total column where they are column percentages. Bold = statistically significant at p < 0.05.
[a] Chi-square test.

department, and pharmacy (Table 1). Among the study participants, 73 (23.8%) were men and 233 (76.2%) women. The mean age of the health-care workers was 31.87 (standard deviation ± 9.53, range = 18–60 years). Majority of the study participants (80.4%) aged younger than 30 years. One hundred sixty-eight participants (54.9%) were married, of whom 57.9% were married within the last 3 years. The median number of children among the health-care workers was 2 (Inter-quartile range (IQR) = 0–2). There were 168 (54.9%) Christians, 124 (40.5%) Hindus, and 14 (4.6%) belonged to other faiths. Twenty-five respondents (8.2%) reported death of a family member (spouse, child, parent or sibling) within the last one year and 2 (0.7%) reported marital separation or divorce in the last one year.

Among the health-care workers in the study, 148 (48.4%) had low self-esteem, 118 (38.6%) were found to have stress, and 149 (48.7%) had burnout (Table 2). Those aged older than 50 years had significantly higher self-esteem than younger health-care workers. Self-esteem was significantly higher among doctors and among those with a postgraduate medical degree compared with other education degrees. Participants with high self-esteem were significantly more likely to be married. Stress was significantly lower among those aged 50 years and older as compared with other age-groups. Stress was significantly lower among doctors as compared with the other cadre of workers. Stress was also significantly lower among those with a postgraduate medical degree, that is, MD/MS. Health-care workers with stress had a significantly lower median monthly per capita income than those who did not have stress. Doctors had significantly lower levels of burnout as compared with other cadre of health workers.

We found no significant association between stress, self-esteem, or burnout and other factors such as total duration of employment, duration of employment at the current hospital, religion, gender, duration of married life, number of children, death of a close family member within the last one year, or marital separation within the last one year.

When the significantly associated variables were entered into a multivariate logistic regression model, none of the sociodemographic and economic factors remained significant.

Low self-esteem was significantly associated with high stress (Table 3). Health-care workers with low self-esteem were nearly thrice more likely to suffer high stress [OR = 2.84 (1.36–5.92) $p < 0.001$]. Low self-esteem and/or stress were significantly associated with burnout (Table 4). Health-care workers with high stress were more than thrice likely to suffer burnout [OR = 3.6 (2.02-6.55) $p < 0.001$]. Path analysis was conducted to check the hypothesis that low self-esteem leads to high stress which in turn leads to burnout. Fig. 1 indicates that low self-esteem has a direct effect on burnout, and it also has an indirect effect on burnout through the mediator variable, that is, stress. This was found to be statistically significant ($p = 0.007$) (Table 5).

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Table 4
Association of burnout with self-esteem and/or high stress

Variable	Category	Total N = 306	Burnout		p value
			Yes 149 (48.7)	No 157 (51.3)	
Low self-esteem	Yes	148 (48.4)	89 (60.1)	59 (39.9)	**<0.001***
	No	158 (51.6)	60 (38.0)	98 (62.0)	
High stress	Yes	118 (38.6)	84 (71.2)	34 (28.8)	**<0.001***
	No	188 (61.4)	65 (34.6)	123 (65.4)	
Low self-esteem and high stress	Yes	82 (26.8)	61 (74.4)	21 (25.6)	**<0.001***
	No	224 (73.2)	88 (39.3)	136 (60.7)	

The numbers in parentheses are row percentages, except in the total column where they are column percentages. Bold = statistically significant at $p<0.05$.
* Chi-square test.

Table 5
Path regression coefficients for direct, indirect, and total effects

Causal variables	Endogenous variable (outcome variable)		
	Burnout		
	Standardized path coefficient	SE	P value
High stress			
Direct effect	0.51	0.19	0.007
Indirect effect	0	—	—
Total effect	0.51	0.19	0.007
Low self-esteem			
Direct effect	1.09	0.16	<0.001
Indirect effect	0.18	0.06	0.01
Total effect	1.27	0.15	<0.001

4. Discussion

This study found that among health-care workers in a private tertiary hospital, there were high levels of stress (38.6%), low self-esteem (48.4%), and burnout (48.7%). This finding has implications for the care of patients because health-care workers who feel stressed about their jobs also tend to feel burned out and defeated by the health-care system, leading to less motivation to improve conditions, both for themselves and for patients. This is in addition to possible health-related issues for the health workers themselves as work-related stress has been associated with increased rates of hypertension and cardiovascular disease [15]. Workload demands and performance expectations are key sources of job stress, and these are experienced by health-care workers in a high pressure setting on a daily basis.

Research in the United States shows that stress in the workplace has escalated over the past few decades and is by far the major source of stress among adults, with 29% reporting stress at work and 26% reporting burnout across different professions [16]. Among doctors, this is worse, with 40% of doctors experiencing emotional, physical, and psychological burnout from their jobs [1]. More than one-fourth of the doctors in the present study suffered low self-esteem and high stress and more than a third of them experienced burnout. This can be explained by the fact that, though doctors interact with people on a daily basis, their training as physicians are focused almost entirely on their technical capabilities, leaving them with few tools for understanding and navigating interactions as part of a larger team or organization. Self-esteem though was significantly higher among doctors in our study, as compared with other health-care workers. This could be attributed to the fact that doctors by virtue of their qualifications are the highest in the hierarchy of decision-making in patient care and usually are deferred to by other members of the health team, including nurses [17].

In the present study, three-fourths of the health-care workers were women, due to the large representation of nurses and nursing aides in the sample. Nearly half the nurses were stressed, while more than half had low self-esteem and suffered from burnout. This could be due to the hierarchical system in health care, long working hours, lack of respect, and low remuneration as compared with doctors, as explained in a qualitative study among nurses in Karnataka, India [18], as well as in Brazil [19] and Ethiopia [20]. In our study, it was found that unmarried participants had significantly lower self-esteem than married participants. Unmarried participants might have to deal with loneliness and family or societal pressure to get married. Among those who were married, it was found that burnout was significantly more among those with a shorter duration of marriage. This could be due to the pressure of learning to balance duties in the workplace and at home, starting a family or raising a family with young children, or even leaving behind very young children in the care of their grandparents in their hometown to enable continuing work. This was also similarly seen in a study among health-care workers in Saudi Arabia [21].

In the present study, while duration of employment was not associated with stress or burnout, those aged younger than 30 years had significantly greater stress and lower self-esteem in our study, possibly due to junior position in the health team and subsequent lower income, academic pressure to study further, or lack of family support as most of the young doctors, nurses, aides, and technicians reside in hostels on campus. A similar finding with regards to young doctors suffering from high stress was reported in the UK [22]. Younger health-care workers living away from the spouse is also a factor that has been found in a study carried out in Karnataka, India, where nurses who stay with their husbands have higher self-

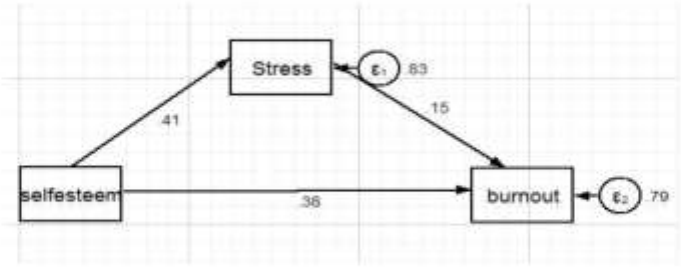

Fig. 1. Path analysis indicating causal pathway between low self-esteem and burnout through stress.

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esteem as compared with nurses who stay away from their husbands because of their job [18].

Health-care workers with a postgraduate degree had significantly higher self-esteem and lower stress levels. This could be explained by the higher levels of personal achievement experienced through higher education, as shown in a study among health-care workers in Brazil [23].

In the present study, the risk of stress was nearly three times higher among health-care workers with low self-esteem, and participants who were stressed were more than thrice likely to experience burnout. Studies among Polish and Dutch nurses [6] and among health-care workers in Spain [24] have also demonstrated that low self-esteem and stress at work are significantly associated with burnout. Low self-esteem can lead to psychological effects that cause a person to be more susceptible to stressful situations. Another aspect of the connection between stress and self-esteem is that a lack of assertiveness is one of the common effects of a lower self-esteem. This can turn into a vicious cycle in which low self-esteem leads a person to accept more work than he or she can truly handle. This, in turn, causes increased stress [25]. While low self-esteem has been independently linked to burnout [26], burnout is also a consequence among workers exposed to high level of stress at work. This relationship pathway has been clearly illustrated in the present study, with low self-esteem having a direct effect on burnout, as well as an indirect effect through the mediator variable (stress). A similar model using standardized path coefficient has been demonstrated in an Italian study, where high workload leads to exhaustion with job control as a mediator variable [27].

While the work of health-care professionals can be gratifying, factors however such as work–life imbalance, long hours, perceived workload, lack of communication, and hierarchical work structure may consequently increase the risk of low self-esteem, with subsequent increase in stress and burnout [28]. Health-care workers therefore need to be screened for low self-esteem, stress, and burnout as part of their periodic medical examination at the workplace. Counseling services at the workplace for health-care workers would help to address this issue and benefit not only the health care worker but also the patient and the hospital. There is scope for further research in this area to probe into how working conditions, interpersonal relationships, and incentives play a role in self-esteem, stress, and burnout among these health-care workers. This study indicates the need for screening and counseling for low self-esteem, stress, and burnout as part of a periodic medical examination of all cadres of health workers.

5. Limitations

Owing to time and resource constraints, a cross-sectional study design was used, which may not be the ideal design to determine a temporal relationship between stress and burnout. The study may have missed workers who had experienced severe stress and/or burnout, causing them to have left the workplace already, leading to a selection bias as a result of "healthy worker effect phenomenon" [29].

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Author contributions

A.R.J. contributed in concept and design of the study, data interpretation, writing the first draft of the manuscript, and revising the manuscript and was accountable for all aspects related to the accuracy and integrity of the research work. R.J. contributed in data analysis and manuscript revisions. M.J. contributed in data collection, data entry, and writing of the manuscript. A.K. contributed in data collection, data entry, and writing of the manuscript. R.K. contributed in data analysis and data interpretation. B.J. contributed in design of the study, interpretation of data, and final approval of the manuscript.

Conflicts of interest

All authors have no conflicts to declare.

Appendix A. Supplementary data

Supplementary data to this article can be found online at https://doi.org/10.1016/j.shaw.2020.05.009.

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