LITERATURE REVIEW: HUBUNGAN KOPING SPIRITUAL DENGAN ANSIETAS PADA KLIEN KANKER

SKRIPSI

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FAKULTAS ILMU KESEHATAN
UNIVERSITAS dr. SOEBANDI
2021

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SKRIPSI

Untuk Memenuhi Persyaratan Memperoleh Gelar
Sarjana Ilmu Keperawatan(S.Kep)

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MOTTO

“Dan aku menyerahkan urusanku kepada Allah)”

(QS. Al-Mu’min Ayat 44)

“Dekati Allah maka dunia akan mendekat”

(Gita Pragasari)

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Skripsi ini telah diperiksa oleh pembimbing dan telah disetujui untuk mengikuti seminar hasil pada Program Studi Sarjana Keperawatan
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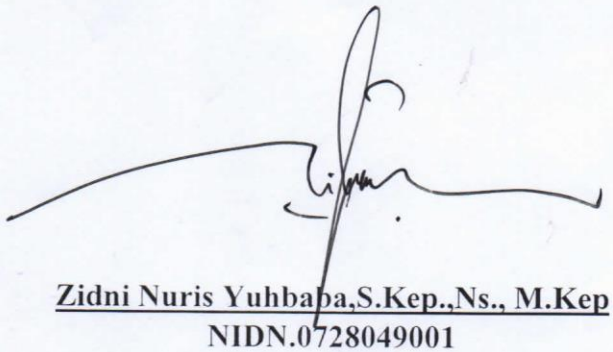

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LEMBAR PERNYATAAN ORISINIL

Saya yang bertanda tangan di bawah ini, menyatakan dengan sesungguhnya bahwa Skripsi yang berjudul "Hubungan Koping Spiritual dan Ansietas pada Klien Kanker *Literature review*" adalah karya sendiri dan belum pernah diajukan untuk memperoleh gelar kesarjanaan di suatu perguruan tinggi manapun.

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

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Jember, 13 Juli 2021

Gita Pragasari
17010054

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HALAMAN PENGESAHAN

Skripsi yang berjudul (Hubungan Koping Spiritual dengan Ansietas pada klien kanker) telah diuji dan disahkan oleh:

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SKRIPSI

Literatur Review: **Hubungan Koping Spiritual dengan Ansietas pada Klien Kanker**

Oleh:

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ABSTRAK

Pragasari, Gita* Pranata, Andi Eka**, Yuhbaba, Zidni Nuris***. 2021. ***Literatur Review*** : **Hubungan Koping Spiritual dengan Ansietas pada klien kanker,** Program Studi Ilmu Keperawatan Universitas dr.Soebandi Jember.

Pendahuluan: Kanker menjadi salah satu penyakit kronik yang tidak hanya memerlukan perawatan medis tetapi juga dukungan psikologis. Banyak pasien mengalami masalah psikologis yang diakibatkan dari rasa cemas dikarenakan terdiagnosis kanker. Ansietas pada pasien kanker mengakibatkan penderita kanker mengalami penerimaan diri yang rendah, harga diri yang rendah, merasa putus asa, bosan, frustasi, tertekan dan takut kehilangan seseorang.Koping spiritual merupakan salah satu cara individu menggunakana keyakinan dalam mengelola kecemasan dan masalah – masalah dalam kehidupan dengan lebih mendekatkan diri kepada tuhan. **Tujuan :** *Literature Riview* ini adalah Mengetahui hubungan koping spiritual dengan ansietas pada klien kanker berdasarkan kajian *literature review*. **Desain penelitian :** jenis penelitian dengan studi literature, dari *database Google scholar, Pubmade* pada *tahun 2016-2020,* seleksi menggunakan format PICOS dengan criteria inklusi koping spiritual dan ansietas pada klien kanker, desain artikel *cross-sectional.* **Hasil :** Hasil tinjauan *literature review* ini yang diperoleh Berdasarkan hasil analisis dari lima artikel memiliki koping spiritual yang baik (65,8%) dan koping spiritual yang buruk (31%). Kemudian ditemukan memiliki *ansietas* yang rendah (62,1%) dan ansietas yang tinggi sebanyak (37,6%). Dari kelima artikel tersebut seluruhnya menunjukkan ada hubungan koping spiritual dengan ansietas klien kanker. **Kesimpulan :** Dari 5 artikel yang telah diakses uji anlisisnya menyatakan semua nilai p-value <0,05 yang berarti terdapat hubungan koping spiritual dengan ansietas pada klien kanker.

Kata Kunci : Koping Spiritual, Ansietas, Kanker

* Peneliti
** Dosen Pembimbing 1
*** Dosen Pembimbing 2

ABSTRACT

Pragasari, Gita* Pranata, Andi Eka**, Yuhbaba, Zidni Nuris***. 2021. *Literature Review:* ***Relationship of Spiritual Coping with Anxiety in Cancer Clients,*** *Nursing Science Study Program University dr. Soebandi Jember.*

Introduction: *Cancer is a chronic disease that not only requires medical treatment but also psychological support. Many patients experience psychological problems due to anxiety due to being diagnosed with cancer. Anxiety in cancer patients causes cancer patients to experience low self-acceptance, low self-esteem, feeling hopeless, bored, frustrated, depressed and afraid of losing someone. Spiritual coping is one of the ways individuals use faith in managing anxiety and problems in life by getting closer to God.* ***Purpose:*** *This literature review is to explain the relationship between spiritual coping and anxiety in cancer clients based on a literature review. from the related literature.* ***Research design:*** *the type of research with a literature study, from the Google scholar database, Pubmade in 2016-2020, selection using the PICOS format with inclusion criteria for spiritual coping and anxiety in cancer clients, cross-sectional article design.* ***Results:*** *The results of this literature review were obtained. Based on the results of the analysis of five articles, they had poor spiritual coping (31%) and good spiritual coping (65,8%). Then it was found to have low anxiety (62.1%) and high anxiety (37.6%). All of the five articles show that there is a relationship between spiritual coping and the anxiety of cancer clients.* ***Conclusion:*** *From the 5 journals that have been accessed, the analysis test states that all p-values are <0.05, which means that there is a relationship between spiritual coping and anxiety in cancer clients.*

Keywords: Spiritual Coping, Anxiety, Cancer

* Peneliti
** Dosen Pembimbing 1
*** Dosen Pembimbing 2

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DAFTAR ISTILAH

Beliefs : Keyakinan

Comparation : Pembanding

Intervention : Perlakuan

Knowledge : Pengetahuan

Language : Bahasa

Literatur Review : Ulasan Literatur

Obesitas : Kegemukan

Outcome : Kriteria hasil

Population : Populasi

Predisposing Factor : Faktor Predisposisi

PRISMA : *Preferred Reporting Items for Systematic Reviews and Meta-Analyses*

Riskesdas : Riset Kesehatan Dasar

Study Design: Desain studi

WHO : World Health Organisation

WHOQOL-BRE : world health organization quality of life-bref

BAB I

PENDAHULUAN

1.1 Latar Belakang Masalah

Kejadian ansietas merupakan salah satu masalah fisik dan psikologis yang dialami oleh penderita kanker di seluruh dunia. Kecemasan merupakan gejala umum yang timbul akibat diagnosis kanker. Perubahan fisiologis yang ditimbulkan dari kecemasan seperti: gemetar, berkeringat, detak jantung meningkat, nyeri abdomen, sesak nafas dan perubahan perilaku seperti: gelisah, bicara cepat, reaksi terkejut dan secara tidak langsung melalui timbul gejala sebagai upaya untuk melawan kecemasan. Takut merupakan penilaian intelektual terhadap suatu yang berbahaya, sedangkan ansietas adalah respon emosional terhadap penilaian tersebut (Keliat, 2012). Menurut NANDA (2015) ansietas adalah perasaan tidak nyaman atau kekhawatiran yang samar disertai respon otonom (sumber tidak diketahui oleh individu) sehingga individu akan meningkatkan kewaspadaan untuk mengantisipasi.

Berdasarkan data prevalansi kecemasan pada pasien kanker masih sangat tinggi terutama diberbagai negara. Organisasi Kesehatan Dunia (WHO, 2017) menyatakan bahwa depresi dan kecemasan akibat kanker prevalensinya cukup tinggi. Lebih dari 200 juta orang di seluruh dunia (3,6% dari populasi) menderita kecemasan akibat kanker. Sementara itu jumlah penderita depresi dan kecemasan akibat kanker hampir separuhnya berasal dari wilayah Asia Tenggara dan Pasifik Barat. Menurut catatan Riset Kesehatan Dasar (Riskesdas) dari Kementrian Kesehatan Republik Indonesia, prevalensi gangguan emosional pada penduduk berusia 15 tahun ke atas, meningkat dari 6% di tahun 2013 menjadi 9,8% di tahun 2018. Provinsi Jawa Timur dan kota Surabaya, data menurut Riskesdas pada tahun 2018 prevalensi gangguan mental emosional tercatat sebesar 6,82%. Hasil penelitian mengenai kecemasan pada pasien kanker di RSUP Hasan Sadikin Bandung dari 97 responden mengalami tingkat state anxiety (kecemasan

sementara) sebanyak 58 responden (59,8%), sedangkan untuk tingkat trait anxiety (kecemasan tetap) sebanyak 53 responden (54,6%) (Pratiwi dkk., 2017). Penelitian Haris (2015) menunjukkan pasien kanker paru di RS Persahabatan Jakarta. Insiden kejadian ansietas pada penderita kanker sebanyak 35 pasien (50%) dengan 23 orang (32,9%) diantaranya dikategorikan sebagai kecemasan ringan, sedangkan 33 pasien (47,1%) ditemukan menderita depresi dan 28 orang (40%) di antaranya yang dikategorikan sebagai depresi ringan dan pasien berpendidikan cenderung mudah terpengaruh dengan gangguan kejiwaan ini.

Kondisi tersebut menunjukkan bahwa ansietas pada klien kanker erat hubungannya dengan masalah psikologis seseorang. Masalah psikologis muncul akibat kondisi fisik dan psikis karena penyakit fisik sehingga akan memunculkan masalah psikososial. Kanker sebagai penyakit kronis sangat beresiko menimbulkan masalah psikososial bagi penderitanya. Menderita kanker akan menjadi peristiwa traumatik bagi dirinya, keluarga serta lingkungan pasien dan berkontribusi pada masalah psikososial yang dialami pasien serta keluarga. Kondisi ini terjadi karena penyakit kanker sendiri yang sudah menjadi stressor utama bagi pasien dan menjadi peristiwa yang krisis (Shankar,dkk,2016).

Terdapat beberapa factor yang dapat membawa dampak terhadap kesehatan fisik dan psikologis. Salah satu dampak psikologis yaitu ansietas atau kecemasan (Sutejo, 2018). Menderita kanker telah menjadi stressor yang besar dan menimbulkan kecemasan tentang fungsi, nilai sosial, keuangan, beban keluarga serta kematian. Selain itu, ansietas pada klien kanker akan menghasilkan dampak yang membuat ketidaknyaman baik fisik maupun psikologis (Berihun,dkk,2017). Menurut Haris dkk (2015) dampak dari kecemasan pada Pasien kanker akan mengalami penerimaan diri yang rendah, harga diri yang rendah, merasa putus asa, bosan, cemas, frustasi, tertekan dan takut kehilangan seseorang.

Kondisi psikologis yang makin terhimpit membuat pasien harus mencari cara agar dapat menyesuaikan diri terhadap masalah. Kemampuan menyesuaikan diri terhadap stresor disebut koping mekanisme. Apabila strategi koping dilakukan secara efektif, maka menghasilkan adaptasi yang baik dan menjadi suatu pola baru dalam kehidupan (Stuart, 2016). Spiritual coping merupakan cara individu menggunakan keyakinannya dalam mengelola stres dan kecemasan serta masalah-masalah dalam kehidupan (Utami,2016). Sedangkan menurut Pargament (2005), spiritual coping merupakan upaya memahami dan mengatasi sumber-sumber stres dan kecemasan dalam hidup dengan melakukan berbagai cara untuk mempererat hubungan individu dengan Tuhannya.

Koping spiritual adalah suatu cara individu menggunakan keyakinannya dalam mengelola kecemasan dan masalah-masalah dalam kehidupan. Hal ini merupakan salah satu strategi untuk meminimalisir atau mengatasi stres dan kecemasan yang muncul akibat situasi atau keadaan yang menekan melalui ibadah, lebih mendekatkan diri pada Tuhan dan cara keagamaan lainnya (Anggraini,2016). Berdasarkan beberapa paparan diatas dapat disimpulkan bahwa koping spiritual adalah teknik mengatasi masalah atau tekanan yang dihadapi dalam hidup dengan memasukkan unsur religius atau spiritualitas yang mengacu kepada satu kekuatan yang amat besar yang disebut dengan Tuhan. Oleh sebab itu,penulis ingin mengidentifikasi hubungan koping spiritual dengan ansietas pada klien kanker dengan menggunakan berbagai kajian *literatur*.

1.2 Rumusan masalah

Berdasarkan uraian dari latar belakang maka rumusan masalah dalam penelitian ini adalah “Apakah Ada Hubungan Koping Spiritual Dengan Ansietas Pada klien kanker berdasarkan kajian *literature review* ?”

1.3 Tujuan Penelitian

1.3.1 Tujuan Umum

Menganalisis hubungan koping spiritual dengan ansietas pada klien kanker berdasarkan kajian *literature review*.

1.3.2 Tujuan Khusus

1. Mengidentifikasi koping spiritual pada klien kanker berdasarkan kajian *literature review*.
2. Mengidentifikasi ansietas pada klien kanker berdasarkan kajian *literature review*.
3. Menganalisis koping spiritual dengan ansietas pada klien kanker berdasarkan kajian *literature review*.

1.4 Manfaat Penelitian

1.4.1 Manfaat Teoritis

Secara teoritis hasil *review* ini diharapkan dapat diketahui bagaimana hubungan koping spiritual dengan ansietas pada klien kanker, sebagai langkah awal intervesi untuk mengembangkan individu dalam pengendalian penyakit kanker.

1.4.2 Manfaat Praktisi

Koping spiritual dapat menjadi salah satu intervensi mandiri untuk menurunkan kecemasan pada klien kanker dalam meningkatkan kualitas hidup klien kanker.

1.4.3 Manfaat Bagi Peneliti

Hasil penelitian *literature review* ini dapat menjadikan pengalaman bagi peneliti, menambah wawasan dan digunakan untk memberikan gambaran tentang “hubungan koping spiritual dengan ansietas pada klien kanker” dengan kasus yang serupa.

BAB II

TINJUAN PUSTAKA

2.1 Konsep Teori Ansietas

2.1.1 Definisi Ansietas

Pada dasarnya, ansietas merupakan hal wajar yang pernah dialami oleh setiap manusia.ansietas sudah dianggap sebagai bagian dari kehidupan sehari-hari. Kondisi emosi dan pengalaman subyektif individu terhadap objek yang tidak jelas dan spesifik akibat antisipasi bahaya yang memungkinkan individu melakukan tindakan untuk menghadapi ancaman (PPNI, 2016). Pengaruh tuntutan, persaingan, serta bencana yang terjadi dalam kehidupan dapat membawa dampak terhadap kesehatan fisik dan psikologi.Salah satu dampak psikologis yaitu ansietas atau kecemasan (Sutejo, 2018).

Ansietas adalah suatu perasaan takut yang berasal dari eksternal atau internal sehingga tubuh memiliki respons secara perilaku, emosional, kognitif, dan fisik (Videbeck, 2011). Sedangkan Menurut NANDA (2015) Ansietas adalah perasaan tidak nyaman atau kekhawatiran yang samar disertai respon otonom (sumber tidak diketahui oleh individu) sehingga individu akan meningkatkan kewaspadaan untuk mengantisipasi.

2.1.2 Jenis – Jenis Kecemasan

Jenis – jenis kecemasan menurut Zaviera (2016), diantaranya yaitu kecemasan obyektif (*Realistics*) ialah jenis kecemasan yang berorientasi pada aspek bahaya – bahaya dari luar seperti misalnya melihat atau mendengar sesuatu yang dapat berakibat buruk.Kecemasan neurosis adalah suatu bentuk jenis kecemasan yang apabila insting pada panca indera tidak dapat dikendalikan dan menyebabkan seseorang berbuat sesuatu yang dapat dikenakan sanksi hukum.Kecemasan moral adalah jenis kecemasan yang timbul dari perasaan sanubari terhadap perasaan berdosa apabila seseorang melakukan sesuatu yang salah.

2.1.3 Etiologi

Berbagai teori yang telah dikembangkan oleh para ahli untuk mengetahui dari penyebab anstietas, menurut Stuart & Sundeen (2013) menjelaskan ansietas disebabkan oleh :

1. Faktor Predisposisi :

1) Dalam pandangan psikoanalitis, ansietas adalah konflik emosional yang terjadi antara dua elemen kepribadian : id dan superego. Id mewakili dorongan instring dan *impuls primitif*, sedangkan superego mencerminkan hati nurani dan dikendalikan oleh norma budaya. Ego atau Aku, berfungsi menengahi tuntutan dari dua elemen yang bertentangan tersebut, dan fungsi ansietas adalah meningkatkan ego bahwa ada bahaya.
2) Menurut pandangan interpersonal, ansietas timbul dari perasaan takut terhadap ketidaksetujuan dan penolakan interpersonal. Ansietas juga berhubungan dengan perkembangan trauma, seperti perpisahan dan kehilangan, yang menimbulkan kerentanan tertentu. Individu dengan harga diri rendah terutama rentan mengalami ansietas yang berat.
3) Menurut pandangan perilaku, ansietas merupakan produk frustasi yaitu segala sesuatu yang mengganggu kemampuan individu untuk mencapai tujuan yang diinginkan. Ahli teori perilaku lain menganggap ansietas sebagai suatu dorongan yang dipelajari berdasarkan keinginan dari dalam diri untuk menghindari kepedihan. Ahli teori pembelajaran meyakini bahwa individu yang terbiasa sejak kecil dihadapkan pada ketakutan yang berlebihan lebih sering menunjukkan ansietas pada kehidupan selanjutnya. Ahli teori konflik memandang ansietas sebagai pertentangan antara dua kepentingan yang berlawanan. Mereka meyakini adanya hubungan timbal balik antara konflik dan ansietas.

4) ansietas, dan ansietas menimbulkan perasaan tidak berdaya, yang pada gilirannya meningkatkan konflik yang dirasakan.
5) Kajian keluarga menunjukkan bahwa gangguan ansietas biasanya terjadi dalam keluarga. Gangguan ansietas juga tumpang tindih antara gangguan ansietas dengan depresi.
6) Kajian biologis menunjukkan bahwa otak mengandung reseptor khusus untuk benzodiazepine, obat-obatan yang meningkatkan neuroregulator inhibisi asam gama-aminobutirat (GABA) yang berperan dalam mekanisme biologis yang berhubungan dengan ansietas.

2. Faktor Presipitasi

Stresor pencetus dapat berasal dari sumber internal atau eksternal. Stresor pencetus dapat dikelompokkan dalam dua kategori :

1) Ancaman terhadap integritas fisik meliputi disabilitas fisiologis yang akan terjadi atau penurunan kemampuan untuk melakukan aktivitas hidup sehari - hari.
2) Ancaman terhadap sistem diri dapat membahayakan identitas, harga diri, danfungsi sosial yang terintegrasi pada individu.

2.1.4 Tanda dan Gejala Ansietas

Menurut PPNI (2016) tanda dan gejala ansietas disajikan dalam tabel :

Tabel 1

Gejala dan Tanda mayor ansietas

Subjektif	Objektif
Meras bingung Merasa khawatir dengan akibat dari kondisi yang dihadapi Sulit berkonsentrasi	Tampak gelisa Tampak tegang Sulit tidur

Sumber : PPNI,Strandar Diagnosis Keperawatan Indonesia (2016)

Tabel 2

Gejala dan Tanda Minor Ansietas

Subjektif	Objektif
Mengeluh pusing Anoreksia Palpitasi Merasa tidak berdaya	Frekuensi nafas meningkat Frekuensi nadi meningkat Tekanan darah meningkat Tremor dan Muka tampak pucat Suara bergetar Kontak mata buruk Sering berkemih

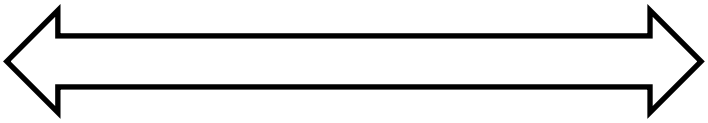
Sumber : PPNI,Strandar Diagnosis Keperawatan Indonesia (2016)

2.1.5 Patofisiologi Ansietas

Sistem syaraf pusat menerima suatu persepsi ancaman. Persepsi ini timbul akibat adanya rangsangan dari luar dan dalam yang berupa pengalaman masa lalu dan faktor genetik. Kemudian rangsangan dipersepsi oleh panca indra, diteruskan dan direspon oleh sistem syaraf pusat melibatkan jalur *cortex cerebri – limbic system – reticular activating system – hypothalamus* yang memberikan impuls kepada kelenjar hipofise untuk mensekresi mediator hormonal terhadap target organ yaitu kelenjar adrenal yang kemudian memicu syaraf otonom melalui mediator hormonal yang lain (Owen, 2016).

2.1.6 Rentang Respon Ansietas

Kemampuan individu untuk merespon terhadap suatua nacaman berbeda satu sama lain.perbedaan kemampuan ini berimplikasi terhadap perbedaan tingkat dan respon ansietas yang dialaminya.(asmadi,2008)



Reaspon Adaptif Respon Maladaptif

Antisipasi Ringan Sedang Berat Panik

2.1.7 Tingkatan Ansietas

Tiap tingkatan ansietas mempunyai karakteristik atau manifestasi yang berbeda satu sama lain.manifestasi ansietas yang terjadi tergantung pada kematangan pribadi,pemahaman dalam menghadapi ketegangan,hargadiri dan mekanisme koping yang digunakan .(asmadi,2008)

Tabel 3

Tingkat Ansietas dan Karakteristik

Tingkat Ansietas	Karakteristik
Ansietas Ringan	• Berhubungan dengan ketegangan dalam peristiwa sehari – hari • Kewaspadaan meningkat • Persepsi terhadap lingkungan meningkat • Dapat menjadi motivasi positif untuk belajar dan menghasilkan kreativitas • Respon fisiologis: sesekali nafas pendek,nadi dan tekanan darah meningkat,gajala ringan pada lambung,muka berkerut,serta bibir bergetar. • Respon kognitif: mampu menerima rangsangan yang kompleks,konsentrasi pada masalah,menyelesaikan masalah secara efektif dan terangsang untuk melakukan tindakan . • Respon perilaku dan emosi : tidak dapat duduk tenang,tremor halus pada tangan dan suara kadang – kadang meninggi.

Ansietas Sedang	• Respon fisiologis : sering nafas pendek,nadi ekstra sistol dan tekanan darah meningkat,mulut kering,anoreksia,diare/konstipasi,sakit kepala,sering berkemih dan letih. • Respon kognitif : memusatkan perhatiannya pada hal yang penting dan mengesampingkan yang lain,lapang persepsi menyempit dan rangsangan dari luar tidak mampu diterima. • Respon perilaku dan emosi : gerakan tersentak – sentak,terlihat lebih tegang,bicara banyak dan lebih cepat,susah tidur dan perasaan tidak aman.
Ansietas Berat	• Individu cenerung memikirkan hal yang kecil saja dan mengabaikan hal yang lain. • Respon fisologis : nafas pendek, nadi dan tekanan darah naik,berkeringan dan sakit kepala,penglihatan berkabut,serta tampak tegang. • Respon kognitif : tidak mampu berfikir berat lagi dan membutuhkan banyak pengarahan/tuntunan,serta lapang persepsi menyempit. • Reson perilaku dan emosi : perasaan terancan meningkat dan komunikasi menjadi terganggu (verbalitas cepat).

Panik	• Respon fisiologis : nafas pendek,rasa tercekik dan palpitasi,sakit dada,pucat,hipotensi,serta rendahnya kordinasi motorik. • Respon kognitif : gangguang realitas,tidak dapatberfikir logis,persepsi terhadap lingkungan mengalami distorsi dan ketidak mampuan memahami situasi. • Respon perilaku dan emosi : agitsi, mengamuk dan marah,ketakutan,berteriak – teriak,kehilangan kendali/kontrol diri (aktivitas motorik tidak menentu),perasaan terancam,serta dapat berbuat sesuatu yang membahayakan diri sendiri dan atau orang lain.

Sumber :ASMADI,Teknik Prosedural Keperawatan Konsep dan Aplikasi Kebutuhan Dasar Klien (2008)

2.1.8 Dampak Ansietas

Ansietas dalam jangka pendek dapat meningkatkan respon sistem kekebalan tubuh, namun kecemasan dalam jangka panjang dapat memiliki efek sebaliknya yaitu seperti depresi, gangguan pola tidur, nyeri kronis, kehilangan minat dalam seksual, pikiran untuk bunuh diri (Pieter,dkk , 2012).

2.1.9 Alat Ukur Ansietas

Ada beberapa alat ukur ansietas yang digunakan dalam penelitian, yaitu :

1. *Hamilton Anxiety Rating Scale* (HARS) HARS merupakan salah satu kuesioner yang mengukur skala ansietas yang masih digunakan sampai saat ini. Kuesioner terdiri atas 14 item. Masing-masing item terdiri atas 0 (tidak terdapat) sampai 4 skor (terdapat). Apabila jumlah skordan emosi yang dialami. Masing-masing item terdiri atas “ya” dan “tidak” (*Psychology tools*, 2017).

2. *Depression, Anxiety Stress Scale* (DASS) DASS terdiri atas pertanyaan terkait tanda dan gejala depresi, ansietas dan stres. Kuesioner DASS ada dua jenis yaitu DASS 42 dan DASS 21. DASS 42 terdiri atas 42 pertanyaan sedangkan DASS 21 terdiri atas 21 pertanyaan, masing-masing gangguan (depresi, ansietas, dan stres) terdapat 7 pertanyaan. Masing-masing item terdiri atas 0 (tidak terjadi dalam seminggu terakhir) sampai 3 (sering terjadi dalam waktu seminggu terakhir) (*Psychology Foundation of Australia*, 2014).
3. *Zung Self-Rating Anxiety Scale* (SAS) Kuesioner SAS terdiri atas 20 pernyataan terkait gejala ansietas. Masing-masing pernyataan terdapat 4 penilaian yang terdiri dari 1 (tidak pernah), 2 (jarang), dan 3 (kadangkadang), dan 4 (sering). Klasifikasi tingkat ansietas berdasarkan skor yang diperoleh yaitu 20-40 (tidak cemas), 41-60 (ansietas ringan), 61-80 (ansietas sedang), dan 81-100 (ansietas berat) (Sarifah, 2013).
4. *Anxiety Visual Analog Scale* (Anxiety VAS) Suatu alat untuk mengukur tingkat kecemasan dengan menggunakan garis horizontal berupa skala sepanjang 10cm atau 100mm. Penilaiannya yaitu ujung sebelah kiri mengidentifikasikan "tidak ada kecemasan" dan semakin ke arah ujung sebelah kana kecemasan yang dialami luar biasa (Misgiyanto & Susilawati, 2014).

2.1.10 Ansietas Pada Klien Kanker

Ansietas merupakan hal yang umum terjadi pada pasien kanker stadium lanjut, akan tetapi hal ini kadang jarang di identifikasi perawat dan tenaga kesehatan karena sulit membedakan gejalanya dengan penyakit terminal seperti turunnya berat badan, insomnia, anoreksi, dan keletihan. Indikator manifestasi klinis dari ansietas pada klien kanker adalah perubahan suasana hati, merasa tidak memiliki harapan, tidak berharga atau perasaan yang bertumpuk, munculnya harapan-harapan

kematian seperti ingin bunuh diri (Black dan Hawks, 2014). Otak merupakan bagian terpenting dalam pengaturan perilaku dan emosi. Pada ansietas terjadi perubahan struktur otak yang masih belum diketahui penyebabnya (Boby Febri, 2019).

Ansietas pada klien kanker erat hubungannya dengan masalah psikologis seseorang. Masalah psikologis muncul akibat kondisi fisik dan psikis karena penyakit fisik sehingga akan memunculkan masalah psikososial. Kanker sebagai penyakit kronis sangat beresiko menimbulkan masalah psikososial bagi penderitanya. Menderita kanker akan menjadi peristiwa traumatik bagi dirinya, keluarga serta lingkungan pasien dan berkontribusi pada masalah psikososial yang dialami pasien serta keluarga. Kondisi ini terjadi karena penyakit kanker sendiri yang sudah menjadi stressor utama bagi pasien dan menjadi peristiwa yang krisis (Shankar,dkk,2016).

Ansietas pada klien kanker harus tetap di tangani untuk menjaga kenyamanan klien. Ansietas pada klien kanker dapat dikurangi dengan mengombinasikan psikoterapi yang suportif, teknik kognitif-behavioral, dan manajemen farmakologis. Disini perawat dapat berkolaborasi dengan disiplin ilmu lain untuk memberi asuhan terbaik pada klien. Perawat harus mengetahui efek dari obat - obat farmakologi yang diberikan agar dapat memberikan edukasi kepada klien dan keluarga (Boby Febri, 2019).

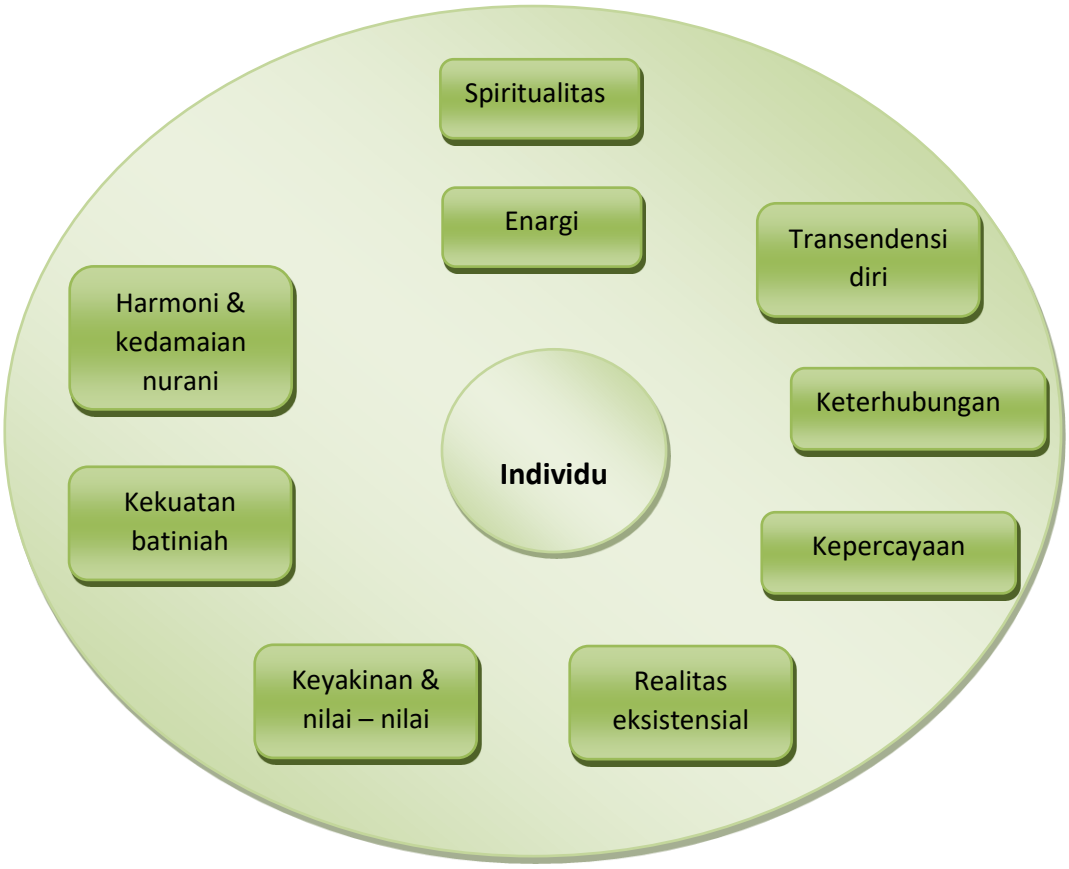
2.2 Konsep Teori Koping Spiritual

2.2.1 Definisi Koping

Koping merupakan suatu proses kognitif dan tingkah laku bertujuan untuk mengurangi perasaan tertekan yang muncul ketika menghadapi situasi stres (Rubbyana, 2012). Mutoharoh, (2010) mendefinisikan coping sebagai upaya untuk mengatur, memenuhi kebutuhan dan mengatasi masalah yang bersifat menantang, mengancam, membahayakan, merugikan, atau menguntungkan seseorang.

2.2.2 Definisi spiritualitas

spiritualitas berasal dari bahasa latin yaitu *spritus* yang berarti bernapas atau angin. Kata ini menunjukkan makna bahwasannya jiwa memberikan kehidupan bagi manusia, hal ini dapat diartikan sebagai segala sesuatu yang menjadi pusat dari semua aspek kehidupan (Potter & Perry, 2010). Menurut Florence nightingale spiritualitas adalah suatu dorongan yang menyediakan energy yang dibutuhkan untuk mempromosikan lingkungan rumah sakit yang sehat dan melayani kebutuhan spiritual sama pentingnya dengan melayani kebutuhan fisik (Delgado,2005)



Gambar 2.2.2 konsep spiritual memiliki delapan batas (modifikasi dari *villagomenza LR: Mending broken hearts: the role of spirituality in cardiac illness: a research synthesis, 1991 – 2004, Holist Nurs Pract 20[4]:169,2006*).

2.2.3 Definisi *Spiritual Coping*

Spiritual coping merupakan cara individu menggunakan keyakinannya dalam mengelola stres dan masalah-masalah dalam kehidupan (Utami,2016). Koenig, (2010), *spiritual coping* didefinisikan sebagai penggunaan keyakinan keagamaan dalam memecahkan masalah, mencegah dan mengurangi akibat negatif dari keadaan emosional kehidupan yang penuh stres. Sedangkan menurut Pargament (2005), *spiritual coping* merupakan upaya memahami dan mengatasi sumber-sumber stres dalam hidup dengan melakukan berbagai cara untuk mempererat hubungan individu dengan Tuhan. Hal ini merupakan salah satu strategi untuk meminimalisir atau mengatasi stres yang muncul akibat situasi atau keadaan yang menekan melalui ibadah, lebih mendekatkan diri pada Tuhan dan cara keagamaan lainnya (Anggraini,2016).

2.2.4 Strategi *Spiritual Coping*

Pargament (2007) yang merupakan seorang pelopor *spiritual coping*, mengidentifikasi strategi spiritual coping menjadi 3 yaitu :

1. *Collaborative*

   Merupakan strategi koping yang melibatkan Tuhan dan individu dalam kerjasama untuk memecahkan masalah yang dialami individu tersebut.
2. *Self-directing*

   Artinya seorang individu percaya bahwa dirinya telah diberi kemampuan oleh Tuhan untuk memecahkan masalah yang dihadapinya.
3. *Deffering*

   Artinya individu bergantung sepenuhnya kepada Tuhan dalam memberikan isyarat untuk memecahkan masalahnya.

2.2.5 Aspek-Aspek *Spiritual Coping*

Pargament (2007) membagi *Spiritual Coping* menjadi dua pola, yakni *Positive Spiritual Coping* dan *Negative Spiritual Coping*. Kedua pola tersebut merupakan pola strategi individu dalam mengelola dirinya pada situasi tertentu melalui spiritual coping

1. *Positive Spiritual Coping*

   Positive Spiritual Coping merupakan sebuah ekspresi spiritualitas, hubungan yang aman dengan Tuhan, keyakinan bahwa ada makna yang dapat ditemukan dalam hidup, dan adanya hubungan spiritualitas dengan orang lain. Bentuk positive spiritual coping ini diasosiasikan dengan tingkat depresi yang rendah dan kualitas hidup yang lebih baik . Penelitian yang dilakukan oleh Jim dkk tentang religious distress and coping with stressful life event, menyatakan bahwa pasien-pasien penderita kanker yang menggunakan koping religius positif dilaporkan memiliki kualitas hidup yang lebih baik. Hal ini membuktikan bahwa positive spiritual coping sangat berhubungan dengan sikap optimis seseorang dalam menghadapi masalah kehidupan.

2. *Negative Spiritual Coping*

   Menurut pargament (2007) *Negative Spiritual Coping* merupakan sebuah ekspresi dari hubungan yang kurang aman dengan Tuhan, penilaian negatif terhadap agamnya, dan sikap pasif pada individu ketika menghadapi suatu masalah yakni hanya menunggu solusi dari Tuhan tanpa aktif bertindak.

2.2.6 Dampak *Spiritual Coping*

1. Dampak Positif

WHO (*World Health Organization*) merupakan organisasi kesehatan tingkat dunia yang menyatakan bahwa individu dikatakan sehat seutuhnya bukan hanya dilihat dari aspek fisik, mental, dan aspek sosialnya saja melainkan juga sehat dari aspek spiritual, yang kemudian oleh American *Psychiatric Association* (APA) dikenal dengan "*Bio-psychosocial-spiritual*". Spiritualitas memiliki kekuatan yang dapat membangkitkan rasa percaya diri, ketenangan jiwa, dan optimisme bagi seseorang dalam menghadapi ujian dalam hidupnya. Individu yang beragama memiliki keyakinan dan senantiasa berserah diri kepada Tuhan, sikap tersebut memberikan sikap optimis pada diri seseorang sehingga

munculperasaan positif seperti rasa bahagia, tenang, aman, dan Nyaman (Anggraini,2015).

Oleh karena itu *spiritual coping* efektif dalam memulihkan penyakit mental seseorang, mengurangi atau bahkan menghilangkan kecemasan dan depresi sehingga tekanan darah menjadi stabil. Menurut Pargament (2007), *spiritual coping* dapat membangun kedekatan dengan orang lain, mengontrol diri sendiri, mengurangi kecemasan, dan sebagai jalan mencari dan menemukan cara - cara untuk lebih dekat dengan Tuhan.

2. Dampak Negatif

Menurut Pargament (2007) Dampak negatifnya ialah individu seperti merasa ditinggalkan oleh Tuhan dan merasa bahwa Tuhan tidak adil padanya sehingga muncul kondisi menekan lain selain kondisi yang ditimbulkan oleh masalah sebelumnya. Hal demikian terjadi karena spiritual pada individu tersebut kurang kuat sehingga persepsi yang muncul adalah negatif terhadap Tuhan dan berakibat buruk pada keadaan mental, fisik dan bisa jadi berefek buruk pada kehidupan sosial.

2.2.7 Faktor Yang Mempengaruhi Faktor Spiritual

Menurut anggraini (2015), banyak faktor – faktor yang dapat mempengaruhi spiritualitas diantaranya:

1. Pendidikan

Pendidikan sangat mempengaruhi penggunaan spiritual coping dalam hidup seseorang, terlebih pendidikan dari keluarga. Fungsi dan peran orang tua dalam keluarga adalah membentuk keyakinan anak-anak mereka. Setiap bayi yang terlahir sudah memiliki potensi beragama, namun bentuk keyakinan agama yang akan dianut anak sepenuhnya tergantung dari bimbingan dan pengaruh kedua orang tua mereka. Apabila orang tua tidak memberikan contoh sikap dan/atau pendidikan agama pada anak sehingga anak tidak memeiliki pengalaman spiritual maka ketika dewasa ia cenderung bersikap negatif terhadap agama. Lain halnya jika orang tua telah memperkenalkan konsepkeimanan kepada Tuhan dan

membiasakan anak pada ritual agama sejak kecil, maka sikap spiritualnya pun akan menjadi positif

Faktor pendidikan keluarga bukan menjadi satu-satunya penentu spiritualitas seorang individu, melainkan juga peran pendidik dalam lingkup formal. Seorang guru memiliki tugas yang cukup berat dalam meluruskan pemahaman dan keyakinan anak yang memiliki pengetahuan dan sikap spiritual yang rendah. Apabila seorang guru mampu membina sikap positif terhadap agama dan berhasil dalam membentuk pribadi dan akhlak anak, maka pada masa remaja nanti anak akan mudah mengembangkan sikap spiritualnya dan akan memiliki pegangan serta bekal dalam menghadapi berbagai masalah yang biasa terjadi pada masa remaja.

2. Pengalaman

Pengalaman seorang individu atau pengalaman orang lain juga turut mempengaruhi penggunaan *spiritual coping* pada seorang individu. Misalnya pengalaman seorang individu yang rutin melaksanakan ibadah sholat tahajud dan mendapatkan manfaat dari ibadahnya tersebut menjadi salah satu faktor penggunaan *spiritual coping* bagi dirinya sendiri dan orang lain.

3. Kebudayaan Setempat

Kebudayaan yang dianut oleh suatu kelompok atau masyarakat dapat mempengaruhi penggunaan *spiritual coping* pada individu karena percaya dengan melakukan hal spiritual tersebut maka persoalan yang dihadapi akan teratasi. Misalnya tiap musim panas di desa Panjaitan melaksanakan sholat istisqa untuk memohon kepada Tuhan agar diturunkan hujan karena di tiap musim panas sumber mata air yang keluar sangat sedikit sehingga sawah di desa tersebut kering kerontang, padahal bertani adalah mata pencaharian utama masyarakat desa Panjaitan.

4. Usia

Usia memiliki pengaruh dalam menggunakan *spiritual coping* untuk menyelesaikan masalah. Hal ini berkaitan dengan pengalaman seseorang, semakin dewasa usia seseorang maka semakin banyak pula pengalaman yang didapatkan dan semakin bijak dalam memilih cara untuk menyelesaikan masalah.

2.2.8 Koping spiritual pada klien kanker dengan ansietas

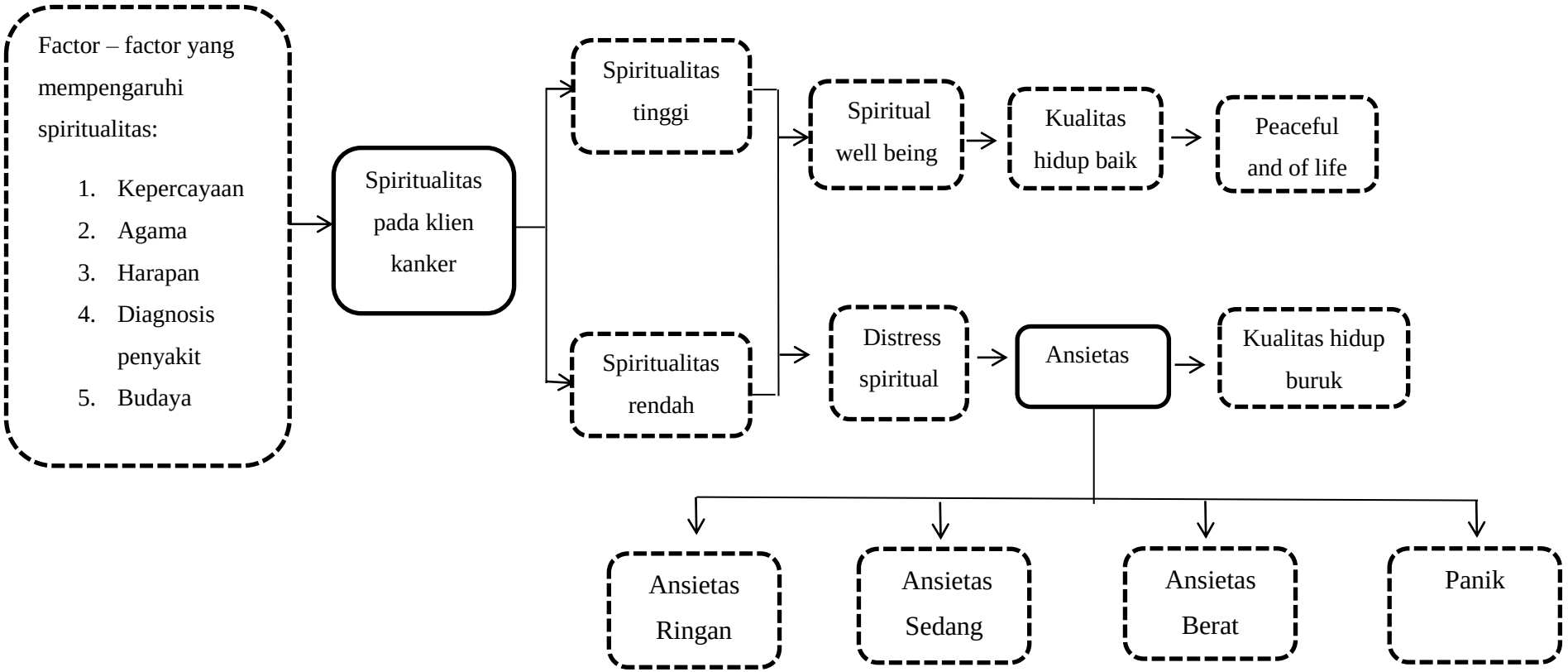
Pada umumnya setiap manusia memiliki banyak kebutuhan yang ingin selalu dipenuhinya dalam hidup. Kebutuhan itu dapat berupa kebutuhan fisik, psikis dan sosial. Sayangnya, dalam kehidupan nyata kebutuhan-kebutuhan tersebut tidak selalu dapat dipenuhi. Keadaan itulah yang sering kali membuat manusia merasa tertekan secara psikologis (psychological stress). Respon dari perasaan tertekan itu dimanifestasikan manusia dalam bentuk prilaku yang bermacam-macam tergantung sejauh mana manusia itu memandang masalah yang sedang dihadapi. Jika masalah yang dihadapinya itu dipandang negatif oleh manusia, maka respon prilakunya pun negatif, seperti yang diperlihatkan dalam bentuk bentuk prilaku neurotis dan patologis. Sebaliknya, jika persoalan yang dihadapi itu dipandang positif oleh mereka yang mengalami, maka respon prilaku yang ditampilkan pun bisa dalam bentuk penyesuaian diri yang sehat dan cara-cara mengatasi masalah. Menurut Lazarus dan Folkman (Persitarini, 1988), coping dipandang sebagai faktor yang menentukan kemampuan manusia untuk melakukan penyesuaian terhadap situasi yang menekan (stressful life events).

Spiritual koping merupakan metode untuk menghilangkan ansietas dengan cara mengalihkan perhatian pada hal-hal lain sehingga pasien akan lupa terhadap ansietas yang dialami. Stimulus sensori yang menyenangkan menyebabkan pelepasan endorfin yang bisa menghambat stimulus ansietas yang mengakibatkan lebih sedikit stimuli ansietas yang ditransmisikanke otak. Salah satu distraksi yang efektif adalah dengan memberikan dukungan

spiritual (membaca doa sesuai agama dan keyakinannya), sehingga dapat menurunkan hormone-hormonstressor, mengaktifkan hormon endorfin alami, meningkatkan perasaan rileks, dan mengalihkan perhatian dari rasa takut, ansietas dan tegang, memperbaiki sistem kimia, tubuh sehingga menurunkan tekanan darah serta memperlambat pernafasan, detak jantung, denyut nadi, dan aktivitas gelombang otak. Laju pernafasan yang lebih dalam atau lebih lambat tersebut sangat baik menimbulkan ketenangan, kendali emosi, dan metabolism yang lebih baik. (Potter & Perry, 2010)

Spiritual koping merupakan salah satu terapi yang mempunyai unsur agama, serta terapi yang dapat mengatasi masalah psikis dengan pendekatan agama sehingga dapat di gunakan untuk mengurangi masalah psikologis berupa ansietas pada klien kanker. Spiritual koping dapat mengatasi ansietas yang dapat dilakukan secara sederhana sesuai dengan agama dan keyakinan yang dianut, hal ini efektif dalam mengatasi ansietas yang dialami oleh seseorang penderita penyakit kronik.

2.3 Kerangka Teori



Gambar 2.3 Kerangka Teori Sumber: Adaptasi (Alligood, 2014; Potter & Perry, 2010; Gundy et al., 2012; Paloutzian et al, 2005; Chaar et al., 2018).

Keterangan :

 = Tidak di Teliti

 = Diteli

BAB 3
METODE PENELITIAN

3.1 Strategi Pencarian *Literature*

3.1.1 Protokol dan Registrasi (Kerangka Kerja)

Rangkuman menyeluruh dalam bentuk *literature review* mengenai hubungan koping spiritual dengan ansietas pada klien kanker. Protokol dan evaluasi dari *literature review* akan menggunakan pedoman *Preferred Reporting Items for Systematic Reviews and Meta-Analyses* (PRISMA) *checklist* sebagai upaya menentukan pemilihan studi yang telah ditemukan dan disesuaikan dengan tujuan dari *literature review* ini.

3.1.2 *Database* Pencarian

Pencarian literatur dilakukan pada bulan September sampai Januari 2020. Sumber data yang digunakan adalah data sekunder, dimana sumber data yang tidak langsung memberikan data pada peneliti. Data sekunder merupakan data yang sifatnya mendukung keperluan data primer seperti buku-buku dan literatur yang berkaitan untuk menunjang penelitian (Sugiyono, 2017). Sumber data diperoleh pada *database Google Scholar*, *Pubmed* dan *elsevier*.

3.1.3 Kata Kunci

Penelitian ini memiliki kata kunci yang sangat luas, oleh sebab itu peneliti menggunakan Boolean "*AND*" untuk mempersempit hasil pencarian sehingga didapatkan artikel atau artikel yang spesifik. Boolean "*OR*" digunakan untuk mempeluas hasil pencarian artikel atau artikel. Kata kunci yang digunakan untuk variabel pertama yaitu "Koping Spiritual" atau "*spiritual coping*", sedangkan untuk kata kunci yang digunakan pada variabel kedua yaitu "Ansietas", "Kanker", "*anxiety*" atau

"*cancer*". Kata kunci ini disesuaikan dengan *Medical Subject Heading (MeSH)* sebagai berikut:

Tabel 3.1 Kata Kunci *Literatur Review*

Koping Spiritual	**Ansetas**	**Kanker**
Koping Spiritual	Ansietas	Kanker
AND	AND	*AND*
Spiritual Coping	*Anxiety*	*Cancer*

3.2 Kriteria Inklusi dan Eksklusi

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

1) *Population/Problem* merupakan populasi atau masalah klinis yang akan dianalisis sesuai dengan tema dalam *literature review*.
2) *Intervention* merupakan strategi manajemen atau tindakan penatalaksanaan yang berhubungna dengan masalah klinis.
3) *Comparation* merupakan alternatif atau strategi kontrol atau tes sebagai pembanding.
4) *Outcome* merupakan hasil yang diperoleh dari studi terdahulu
5) *Study design* merupakan desain penelitian yang digunakan dalam artikel-artikel yang akan di review.

Tabel 3.2 Kriteria Inklusi dan Eksklusi Literatur Review Hubungan koping spiritual dengan ansietas pada klien kanker

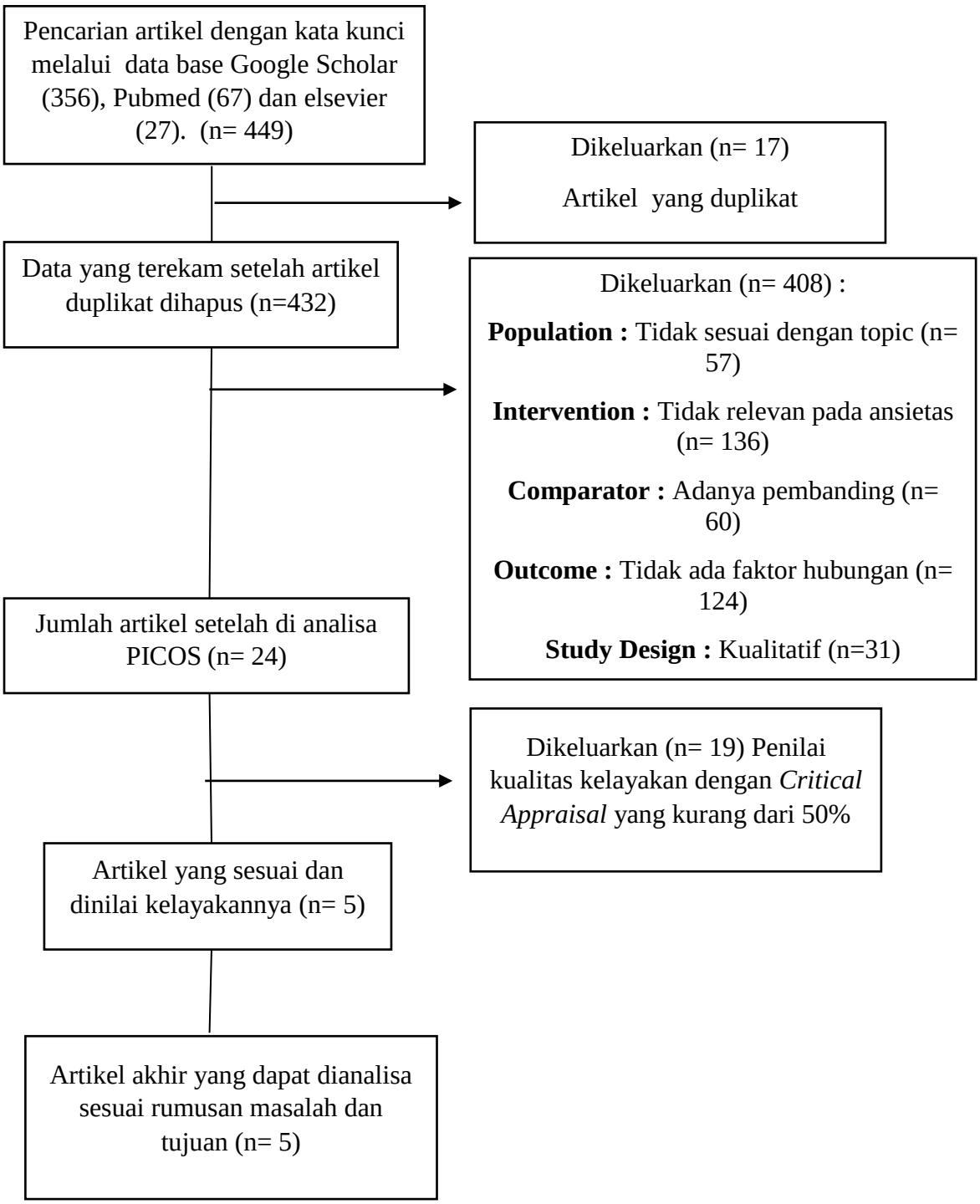
PICOS	Kriteria Inklusi	Kriteria Eksklusi
Population	Klien Kanker dengan stadium lanjut	Selain klien kanker
Intervention	Tidak ada intervensi	Ada intervensi
Comparation	Tidak ada faktor pembanding	Ada faktor pembanding
Outcome	Ada dan tidak adanya hubungan antara koping spiritual dan ansietas pada klien kanker	Tidak menjelaskan ada atau tidak adanya hubungan koping spiritual dengan ansietas pada klien kanker
Study Design	*Cross-sectional,correlation* dan studi kuantitatif	Kualitatif dan *Literature review*
Publication Years	Tahun 2016 – 2020	Dibawah tahun 2016
Language	Bahasa Indonesia, dan bahasa Inggris	Selain Bahasa Indonesia, dan bahasa Inggris

3.3 Seleksi Studi dan Penilaian Kualitas

Analisis kualitas metodologi dalam setiap studi (n= 5) menggunakan *critical appraisal The Joanna Briggs Institute* (JBI) *Checklist for Analytical Cross Sectional Studies*. Penilaian kriteria disesuaikan dengan JBI, yaitu "*Yes*", "*No*", "*Unclear*", "*No Applicable*", dan setiap kriteria dengan skor "*Yes*" diberi satu poin dan skor untuk kriteria lainnya adalah nol. Jika skor penelitian setidaknya 50% memenuhi kriteria *critical appraisal,* maka studi dimasukkan ke dalam kriteria inklusi. *Critical appraisal* merupakan sebuah proses yang terstruktur untuk menentukan kekuatan dan keterbatasan dari suatu penelitian dalam artikel, serta menentukan relevansi dengan tujuan khusus penelitian (Aveyerd dalam Rumahorbo dkk., 2020). Dari penilaian tersebut diperoleh enam artikel yang memenuhi kriteria.

3.4 Hasil Pencarian dan Seleksi Studi

Berdasarkan hasil pencarian literatur melalui *database Google Scholar, elsevier dan Pubmed.* Menggunakan kata kunci peneliti mendapatkan 449 artikel dari *Google Scholar* 355 artikel di *Pubmed* 67 artikel dan 27 artikel di *elsevier,* Hasil pencarian yang sudah didapatkan kemudian diperiksa duplikasi, ditemukan terdapat 17 artikel dari Google Scholar yang sama sehingga dikeluarkan dan tersisa 432 artikel. Diskrining kembali sesuai dengan PICOS dikeluarkan 408 artikel dari Google Scholar 327 artikel, 61 artikel dari *Pubmed* dan 20 artikel dari *elsevier* sehingga tersisa 24 artikel, kemudian dilakukan penilaian critical appraisal memenuhi kriteria diatas 50% dan disesuaikan dengan tema literature review yang dikeluarkan 19 artikel dari Google Scholar 10 artikel, 2 artikel dari *Pubmed* dan 7 artikel dari *elsevier,* sehingga mendapatkan 5 artikel. Assessment yang dilakukan berdasarkan kelayakan terhadap kriteri inklusi dan eksklusi didapatkan sebanyak 5 artikel yang bisa dipergunakan dalam literature review. Hasil seleksi artikel studi dapat digambarkan dalam Diagram Alur.



Gambar 3.1 Diagram Alur *literature review* berdasarkan PRISMA 2009
(Polit and Beck dalam Nursalam, 2020)

BAB IV

HASIL DAN ANALISIS

4.1 Karakteristik Studi

Hasil penulusuran artikel dan artikel pada penelitian berdasarkan topik *Literatur Review* ini "Hubungan Koping Spiritual dengan Ansietas Pada Klien Kanker", didapatkan 5 artikel penelitian dengan akreditas *Scientific Journal Rankings* (SJR) berjumlah 5 artikel dengan *best quartile* Q1 berjumlah 5 artikel. Seluruh artikel dan artikel berjenis kuantitatif dengan desain penilitian menggunakan pendekatan studi *cross-sectional.*

Artikel dan artikel yang digunakan pada *Literatur Review* ini berada pada rentang tahun 2016-2020 dan berikut ini hasil analisis artikel yang ditampilkan dalam bentuk tabel sebagai berikut :

Tabel 4.1 Hasil Temuan Artikel

Penulias dan Penerbit	Judul	Desain Penelitian, Sampel, Variabel, Instrument, Analysis	Hasil	Kesimpulan	Sumber
Andrea Bovero, *et al* (2019)	*The Spiritual in End-of-Life Cancer Patiens,in Relation to Anxiety, Depression, coping Strategies and the Daily Spiritual Experiences: A Cross-Sectional Study*	D: *Cross-Sectional*. S : 115 responden pasien kanker V: Kateristik pasien, koping spiritual dan ansietas, menggunakan I : Koping spiritual menggunakan the daily spiritual experiences scale (DSES) dan ansietas menggunakan skala kecemasan dan depresi (HADS) A : Korelasi pearson.	Hasil peneltian pada artikel ini menunnjukkan p value ≤ 0.03	Ada hubungan antara koping spiritual dan *ansietas*	*Scientific Journal Rankings* (SJR) *best quartile* Q1 ISSN 00224197 Doi: 10.1007
Daniel H.Grossoeh me, *et al* (2018)	*Association of Religion and Spiritual Factor With Patien Reported Outcomes of Anxiety,Depressiv e*	D : *Cross-Sectional*. S : 366 responden V : Koping Spiritual dan ansietas I : Koping spiritual menggunakan *multidimensional measurement of religiousness/spirituality* (BMMRS) dan	Hasil peneltian pada artikel ini menunnjukkan p value ≤ 0.01 (P<0,05)	Ada hubungan antara koping spiritual dan *ansietas*	*Scientific Journal Rankings* (SJR) *best quartile* Q1 ISSN 25743805 Doi: 10.1001

	Symptoms,Fatigue, and Pain Interference Among Adolescen and Young Adults whith Cancer	ansietas menggunakan *pediatric PROMIS symptom measures (ie, emotional distress–anxiety; emotional distress–depressive symptoms; fatigue; and pain interference).* A : *statistically significant at 2-tailed*			
Beata Zarzycka, *et a l* (2019)	*Religious comfort and anxiety in women with cancer:The mediating role of hope and moderating role of religious struggle*	D : *Cross-Sectional* S : 77 responden V : Koping spiritual dan ansietas I : Variabel koping spiritual menggunakan *Religious Comfort and Strain Scale* dan variabel ansietas menggunakan State-Trait Anxiety Inventory A : *koefisien korelasi Pearson dan regresi*	Hasil peneltian pada artikel ini menunnjukkan p value < 0.01	Ada hubungan antara koping spiritual dan *ansietas*	*Scientific Journal Rankings* (SJR) *best quartile* Q1 ISSN 10579249 Doi: 10.1002
Guan Chong Ng, *et al* (2016)	*Anxiety and Depression in Cancer Patients: The Association with Religiosity and Religious Coping*	D : *Cross-Sectional* S : 200 responden V : Koping spiritual dan ansietas I : *Brief Religious Coping Scale* digunakan untuk penilaian koping spiritual dan penilaian ansietas menggunakan HADS (Skala Kecemasan dan Depresi Rumah	Hasil peneltian pada artikel ini menunnjukkan p value ≤ 0.01 (P<0,05)	Ada hubungan antara koping spiritual dan *ansietas*	*Scientific Journal Rankings* (SJR) *best quartile* Q1 ISSN 00224197 Doi: 10.1007

		Sakit) A : Uji Chi-Square.			
Jing Chen MD, *et al* (2020)	*Association between spiritual well-being, quality of life, anxiety and depression in patients with gynaecological cancer in China*	D : *Cross-Sectional* S : 705 responden V : Koping spiritual dan ansietas I : *Treatment of Cancer quality of life instruments (EORTC QLQ-SWB32 and EORTC QLQ-C30)* digunakan untuk penilaian koping spiritual dan penilaian ansietas menggunakan HADS (Skala Kecemasan dan Depresi Rumah Sakit) A : *Spearman correlations*	Hasil peneltian pada artikel ini menunnjukkan p value ≤ 0.01 (P<0,05)	Ada hubungan antara *Koping spiritual* dan Ansietas	*Scientific Journal Rankings* (SJR) *best quartile* Q1 ISSN 00332917 Doi: 10.1097

4.2 Karakteristik Responden Studi

Responden pada penelitian ini adalah penderita kanker dari berbagai wilayah dengan karakteristik usia, jenis kelamin, tingkat pendidikan, afiliasi agama dan lama menderita kanker sebagai berikut:

a. Usia

Tabel 4.2 Karakteristik Responden Studi Berdasarkan Usia

No.	Peneliti	Tahun Penelitian	Usia	Persen %
1.	Daniel H.Grossoehme, *et al*	2018	14-21 tahun	16,9%
2.	Beata Zarzycka, *et al*	2019	20-70 tahun	60,5%
3.	Guan Chong Ng, *et al*	2016	>18 tahun	13,2%

Karaktaristik responden berdasarkan jenis usia dari lima artikel, yang membahas berdasarkan jenis usia ada 3 artikel yakni, penelitian oleh Daniel H.Grossoehme, (2019) total resonden 126, mayoritas berusia 14-21 tahun sebanyak 21 responden. Penelitian lain oleh Beata Zarzycka, (2019) total responden 77, mayoritas berusia 20-70 tahun sebanyak 46 responden. Penelitian lain oleh Guan Chong Ng, (2016) total responden 200, mayoritas berusia >18 tahun dengan lebih banyak responden berusia 54 tahun.

b. Jenis Kelamin

Tabel 4.3 Karakteristik Responden Studi Berdasarkan Jenis Kelamin

No.	Peneliti	Tahun Penelitian	Jenis Kelamin	Persen (%)
1.	Guan Chong Ng, *et al*	2016	Perempuan Laki-Laki	81,5% 18,5%

2.	Daniel H.Grossoehme, *et al*	2018	Perempuan Laki-Laki	57,1% 42,9%
3.	Jing Chen MD, *et al*	2020	Perempuan	100%
4.	Andrea Bovero, *et al*	2019	Perempuan Laki-Laki	46,7% 53,3%
5.	Beata Zarzycka, *et al*	2019	Perempuan	100%

Karakteristik responden berdasarkan jenis kelamin dari lima artikel yang didapat yakni, pada penelitian oleh Guan Chong Ng, (2016) total responden 200, mayoritas berjenis kelamin perempuan sebanyak 163 responden. Penelitian lain oleh Daniel H.Grossoehme, (2018) total responden 126, mayoritas berjenis kelamin perempuan sebanyak 72 responden. Penelitian lain oleh Jing Chen MD, (2020) total responden 705, keseluruhan berjenis kelamin perempuan sebanyak 705 responden. Penelitian lain oleh Andrea Bovero, (2019) total responden 152, mayoritas berjenis kelamin laki-laki sebanyak 81 responden. Penelitian lain oleh Beata Zarzycka, (2019) total responden 77, keseluruhan berjenis kelamin perempuan sebanyak 77 responden.

c. Tingkat Pendidikan

Tabel 4.4 Karakteristik Responden Studi Berdasarkan Tingkat Pendidikan

No.	Peneliti	Tahun Penelitian	Tingkat Pendidikan	Persen (%)
1.	Jing Chen MD, *et al*	2020	Tidak sekolah SD SMA Perguruan tinggi	3,4% 44,7% 29,4% 22,5%
2.	Andrea Bovero, *et al*	2019	SD SMP	37,5% 25,7%

			SMA Perguruan tinggi	11,8% 1,3%

Dari kelima artikel terdapat dua artikel yang terdapat karakteristik responden berdasarkan tingkat pendidikan yakni, pada penelitian oleh Jing Chen MD, (2020) total responden 705, mayoritas tingkat pendidikan terbanyak SD sebanyak 315 responden. Penelitian lain oleh Andrea Bovero, (2019) total responden 152, mayoritas tingkat pendidikan tertinggi SD sebanyak 57 responden.

d. Afiliasi Agama

Tabel 4.5 Karakteristik Responden Studi Berdasarkan Afiliasi Agama

No.	Peneliti	Tahun Penelitian	Afiliasi Agama	Persen (%)
1.	Guan Chong Ng, *et al*	2016	Muslim Buddhis Kristen Hindu Lainnya	54,5% 21,5% 12,5% 7,5% 4%
2.	Daniel H.Grossoehme, *et al*	2018	Ateis Kristen Hindu Saksi Jehovah Yahudi Mormon Hilang	19% 71,4% 0,8% 0,8% 0,8% 4,8% 2,4%
3.	Jing Chen MD, *et al*	2020	Ateis	90,5%
4.	Andrea Bovero, *et al*	2019	Katolik, practicing Katolik, practicing Ateis Protestan Evangelis Hilang	75% 11,2% 7,8% 0,7% 0,7% 4,6%

5.	Beata Zarzycka, *et al*	2019	Katolik Protestan Ortodoks	85,7% 7,8% 6,5%

Dari kelima artikel terdapat lima artikel yang terdapat karakteristik responden berdasarkan afiliasi agama yakni, pada penelitian oleh Guan Chong Ng, (2016) total responden 200, mayoritas beragama muslim yaitu sebanyak 109 responden. Penelitian lain oleh Daniel H.Grossoehme, (2018) total responden 126, mayoritas beragama kristen sebanyak 90 responden. Penelitian lain oleh Jing Chen MD, (2020) total responden 705, mayoritas tidak beragama atau ateis sebanyak 639 responden. Penelitian lain oleh Andrea Bovero, (2019) total responden 152, mayoritas beragama katolik practicing sebanyak 114 responden. Penelitian lain oleh Beata Zarzycka, (2019) total responden 77, mayoritas beragama katolik sebanyak 66 responden.

e. Lama menderita Kanker

Tabel 4.6 Karakteristik Responden Studi Berdasarkan Lama Menderita Kanker

No.	Peneliti	Tahun Penelitian	Lama Menderita	Persen (%)
1.	Andrea Bovero, *et a l*	2019	Harapan hidup +_ 1 minggu	66,4%
2.	Beata Zarzycka, *et al*	2019	12 +_ 8 bulan	16%
3.	Guan Chong Ng, *et al*	2016	38 bulan	57%

Dari kelima artikel terdapat tiga artikel yang terdapat karakteristik responden berdasarkan durasi menderita Kanker yakni, pada penelitian oleh Andrea Bovero, (2019) total responden 152, mayoritas lama

menderita kanker memiliki harapan hidup kurang lebih 1 minggu sebanyak 101 responden. Penelitian lain oleh Beata Zarzycka, (2019) total responden 77, mayoritas dengan lama menderita kanker kurang lebih 8-12 bulan sebanyak 77 responden. Penelitian lain oleh Guan Chong Ng, (2016) total resonden 123, mayoritas lama menderita kanker 38 bulan sebanyak 114 responden.

Hasil analisis menunjukan bahwa rata-rata jumlah responden dalam setiap artikel lebih dari 77 responden dengan karakteristik gander lebih banyak perempuan dari pada laki-laki. Lima artikel tersebut sebagian besar respondennya rata-rata berusia 18-70 tahun dengan pendidikan terbanyak yaitu SD. Dari lima artikel ada lima artikel yang terdapat kateristik berdasarkan afilasi agama dan tiga artikel yang terdapat kateristik responden berdasarkan lama menderita dengan nilai rata-rata <8 bulan.

4.3 Koping Spiritual Pada Pasien Kanker

Hasil *review* dari 5 artikel yang diambil ditemukan koping spiritual pada klien kanker dapat dilihat di tabel berikut:

Tabel 4.6 Koping Spiritual Pada Pasien Kanker

No	Peneliti	Tahun	Hasil Temuan Penting
1	Guan Chong Ng, *et al*	2016	Penelitian oleh Guan Chong Ng, (2016) menunjukkan koping spiritual bahwa dari total responden 123 memiliki koping spiritual yang baik sebanyak 64% dan koping spiritual yang buruk sebanyak 36%. Koping spiritual dapat dipengaruhi oleh usia, tingkat pendidikan, dan pengalaman dan factor kebudayaan setempat.
2	Daniel H.Grossoehme, *et al*	2018	Hasil penelitian ini menunjukkan dari total 126 responden menunjukan bahwa frekuensi pasien yang mengalami sub variabel merasakan kehadiran tuhan setiap

			hari atau koping spiritual yang baik sebanyak 39 (31%) dan tidak merasakan kehadiran tuhan sebanyak 83 responden (65,8%). Dengan demikian dapat disimpulkan dalam penelitian ini banyak kelompok yang rendah (kurang) terhadap koping spiritual. Setiap pasien memiliki tingkat koping spiritual yang tinggi dalam waktu yang berbeda.
3	Jing Chen MD, *et al*	2020	Hasil penelitian ini menunjukkan dari total 705 responden, dimana koping spiritual dikaitkan dengan beberapa domain *yaitu Relationship with self (RS) dengan 75,2 responden, Relationship with others (RO) dengan 70,6 responden, Relationship with someone or something greater (RSG) dengan 11,8% responden dan Global-SWB sebanyak 34,9% responden.* Hasil menegaskan hubungan yang signifikan antara agama dengan kenyamana dengan *p-value <0.05.*
4	Andrea Bovero, *et al*	2019	Hasil penelitian ini menunjukkan dari total 126 responden dimana koping spiritual dikaitkan dengan beberapa domain *ansietas,* termasuk gangguan diri (p=0.01), perencanaan (p=0.01), menyalahkan diri sendiri (p=0.01) dan penerimaan (p=0.01). koping spiritual memiliki korelasi positif dengan P<.001 yaitu gangguan diri, perencanaan dan penerimaan. Koping spiritual yang tinggi mampu menerapkan menajemen koping yang baik termasuk perencanaan dan penerimaan.
5	Beata Zarzycka, *et al*	2019	Hasil penelitian ini menunjukkan dari total 77 responden dimana koping spiritual pada penderita kanker cenderung memiliki kenyamanan beragama dimana ditemukan berhubungan positif dengan harapan (0,006),emosi negative kepada tuhan (0,03) dan interaksi negative tentang agama (0,37). Namun agama tidak selalu mendatangkan kenyamanan. Hasil menegaskan hubungan yang signifikan antara agama dengan

			kenyamana dengan *p-value 0.05.*

Pada hasil *review* dari kelima artikel terdapat 4 artikel yaitu Guan Chong Ng (2016), Jing Chen MD (2020), Andrea Bovero (2019) dan Beata Zarzycka (2019) dimana keempat artikel tersebut memiliki kesamaan yang rata – rata dari responden memiliki koping spiritual yang baik, sedangkan satu artikel yaitu milik Daniel H.Grossoehme (2018) dimana didalam artikel tersebut sebagian besar respondenya memiliki koping spiritual yang buruk. koping spiritual merupakan keputusan yang tepat dalam menagemen psikologis seperti perencanaan, harapan dan penerimaan diri yang baik. Koping spiritual dipengaruhi oleh usia, pendidikan, pengalama dan factor kebudayaan (Anggraini,2015).

4.4 Ansietas klien kanker

Hasil *review* dari 5 artikel yang diambil ditemukan ansietas pada klien kanker dapat dilihat di tabel berikut:

Tabel 4.7 ansietas Pada kanker

No	Peneliti	Tahun	Hasil Temuan Penting
1	Guan Chong Ng, *et al*	2016	Pada penelitian ini dari total 200 responden menunjukkan ansietas ansietas baik dan buruk. Dimana ansietas paling banyak dialami oleh responden dengan usia lebih dari 50 tahun dimana ansietas buruk sebanyak 50 responden (37,6%) dan ansietas paling sedikit pada responden yang tidak mengalamiensietas sebanyak 83 responden (62,4%). Ansietas dapat dipengaruhi oleh penderita kanker dengan pendidikan, status ekonomi dan usia.

2	Daniel H.Grossoehme, *et al*	2018	Hasil penelitian ini dari total 126 responden menunjukkan tingkat ansietas yang cukup tinggi. dimana pada ansietas memiliki tingkatan tertenggi dengan 46,7% responden, disusul depresi dengan jumlah sebanyak 45% responden dan gangguan nyeri dengan jumlah sebanyak 45,4% responden.
3	Jing Chen MD, *et al*	2020	Hasil penelitian ini menunjukkan dari total 705 responden menunjukan *ansietas* parah, sedang, ringan dan tidak ada. Dimana responden yang mengalami *ansietas* parah sebanyak 11 responden (1,6%), disusul responden yang mengalami ansietas sedang sebanyak 40 (5,7%), kemudian responden yang mengalami ansietas ringan sebanyak 113 (16%) dan yang tidak mengalami ansietas sebanyak 541 responden (76,7%).
4	Andrea Bovero, *et al*	2019	Hasil penelitian ini dengan 152 responden menunjukkan ansietas berkaitan dengan sub variabel pelepasan, penerimaan, koping aktif, gangguan diri, pembingkaian ulang positif , perencanaan, humor, dan gaya penanggulangan yang dikaitakn dengan usia, status pernikahan, tingkat pendidikan, profesi, caregiver, jenis kanker dan tahap. Dengan demikian dapat disimpulkan Ansietas memiliki korelasi positif terhadap jenis kanker dengan tahap serta dengan usia dengan pendidikan dan profesi.
5	Beata Zarzycka, *et al*	2019	Hasil penelitian dari 77 responden menunjukkan ansietas melalui sub variabel rasa takut - bersalah, emosi negatif, dan kegelisahan. Dengan demikian rasa takut bersalah adalah moderator yang signifikan dari efek tidak langsung keyamanan beragama pada kenyamanan melalui harapan tekait dengan diagnosa kanker yang diterima.

Pada hasil *review* dari kelima artikel terdapat 4 artikel yaitu Guan Chong Ng (2016), Jing Chen MD (2020), Andrea Bovero (2019) dan Beata Zarzycka (2019) dimana keempat artikel tersebut memimiki kesamaan yang sebagian besar respondennya mengalami ansietas yang rendah, sedangkan satu artikel yaitu milik Daniel H.Grossoehme (2018) dimana didalam artikel tersebut sebagian besar respondenya mengalami ansietas yang cukup tinggi. pada penderita kanker mengalami kondisi ansietas merupakan hal yang sering terjadi dimana dapat disebabkan oleh penyakit kanker sendiri yang sudah menjadi stressor utama bagi penderita kanker karena merupakan peristiwa yang krisis dalam kehidupannya (Shankar,dkk,2016). Pada pasien yang tidak memiliki koping yang baik diketahui mengalami ansietas yang cukup tinggi dibandingkan pasien kanker yang memiliki koping yang baik. Ansietas yang tinggi dapat dipengaruhi oleh koping spiritual yang kurang baik.

4.5 Analisa Koping Spiritual dengan Ansietas pada klien Kanker

Hasil review dari 5 artikel ditemukan 5 artikel ada hubungan antara koping spiritual dengan ansietas dengan *p-value <0.05* dapat dilihat di tabel berikut:

No	Peneliti	Tahun	Hasil Temuan
1.	Guan Chong Ng, *et al*	2016	Berdasarkan penelitian oleh Guan Chong Ng, (2016) bahwa koping spiritual berkorelasi positif dengan *p-value <0.03* menjelaskan ada hubungan antara koping spiritual dengan ansietas. Ansietas apat dipengaruhi oleh penderita kanker dengan pendidikan atau pendapatan rendah , usia dan status.

2.	Daniel H.Grossoehme, *et al*	2018	Penelitian oleh Daniel H.Grossoehme, (2018) menunjukkan bahwa ada hubungan signifikan antara koping spiritual dengan ansietas pada Penderita kanker dengan *p-value 0.002<0.005*.
3.	Jing Chen MD, *et al*	2020	Penelitian oleh Jing Chen MD, (2020) menunjukkan bahwa koping spiritual memiliki hubungan positif dengan ansietas dengan *p-value <0.05*. dengan kontribusi sebesar 23,3%.
4.	Andrea Bovero, *et al*	2019	Penelitian oleh Andrea Bovero, (2019) menunjukkan *p-value <0,01,* ini menunjukkan bagaimana koping spiritual yang dicapai dengan memberi makna pada kehidupan atau melalui praktik keagamaan dapat membantu untuk mengatasi ansietas.
5.	Beata Zarzycka, *et al*	2019	Penelitian oleh Beata Zarzycka, (2019) menunjukkan bahwa ada hubungan yang signifikan antara koping spiritual dengan ansietas pada penderita kanker dengan *p-value <0.05,* tetapi ada hubungan yang signifikan dengan beberapa dimensi koping spiritual, misalnya dengan korelasi antara emosi negatif dengan tuhan dan interaksi sosial serta harapan.

BAB V

PEMBAHASAN

5.1 Pembahasan

Pembahasan dari review 5 artikel yang didapat tentang hubungan koping spiritual dengan ansietas pada klien kanker

5.1.1 Koping Spiritual Pada Pasien Kanker

Berdasarkan hasil *review* dari kelima artikel terdapat 4 artikel yaitu Guan Chong Ng (2016), Jing Chen MD (2020), Andrea Bovero (2019) dan Beata Zarzycka (2019) dimana keempat artikel tersebut memiliki kesamaan yang rata – rata dari responden memiliki koping spiritual yang baik, sedangkan satu artikel yaitu milik Daniel H.Grossoehme (2018) dimana didalam artikel tersebut sebagian besar respondenya memiliki koping spiritual yang buruk.

Hasil penelitian Daniel H (2018), menunjukkan Perilaku koping yang berorientasi pada masalah (*Problem-focused coping*) yaitu perilaku yang positif salah satunya *planfull problem solving* dengan mempertimbangkan secara matang beberapa alternatif pemecahan masalah yang mungkin dilakukan, meminta pendapat dari orang lain tentang masalah yang sedang dihadapi, bersikap hati-hati sebelum memutuskan sesuatu dan mengevaluasi strategi yang pernah dilakukan. Sedangkan perilaku koping yang negatif yaitu yang berorientasi pada emosi (*Emotion Focused Coping*) salah satunya perilaku *denial* merupakan sikap individu menolak masalah yang ada dengan menganggap seolah-olah masalah individu tidak ada, artinya individu tersebut mengabaikan masalah yang dihadapinya.

Penelitian Kvillemo & Bränström (2014) menyatakan bahwa koping efektif penderita kanker dipengaruhi oleh stadium kanker, jenis pengobatan durasi penyakit dan jenis koping yang digunakan. Durasi penyakit kanker akan mempengaruhi tingkat stres dan kecemasan jika dihubungkan dengan lama terpapar stresor dan jumlah stresor. Masing-masing individu akan menunjukkan beragam mekanisme koping dalam menghilangkan ketakutannya dan sangat terkait dengan personaliti. Mekanisme koping ini bertugas untuk melindungi individu dari stressor dari dampak yang tidak diinginkan akibat bencana. Apabila individu gagal dalam melakukan mekanisme kopingyang adaptif atau kurang support maka ia akan masuk kedalam kondisi krisis. Atau dengan kata lain, kegagalan individu bertahan dalam kecemasan yang dialami membawa individu tersebut kepada respons maladaftif akibat pemilihan koping yang destruktif. Berdasarkan temuan diatas, penelitian ini akan meneliti penggunaan mekanisme koping dan menghubungkan dengan tingkat stres dan ansietas.

dipengaruhi oleh tingkat pendidikan, pengalaman, usia dan kebudayaan setampat. Seseorang dengan tingkat pendidikan yang baik, lebih matang terhadap proses perubahan dalam dirinya, sehingga lebih mudah menerima perkembangan dari luar yang positif, objektif dan terbuka terhadap berbagai informasi termasuk informasi kesehatan. pengalaman seorang individu juga turut mempangaruhi penggunaan spiritual koping pada seseorang, misalnya pengalaman seorang individu yang rutin melaksanakan ibadah sholat tahajud dan mendapatkan manfaat dari ibadahnya tersebut menjadi salah satu factor penggunaan spiritual koping bagi dirinya sendiri dan orang lain. Kebudayaan

yang dianut oleh suatu kelompok atau masyarakat dapat mempengaruhi penggunaan spiritual koping pada individu karena kepercayaan dengan melakukan hal spiritual tersebut maka persoalan yang dihadapi akan teratasi. Usia erat kaitanya dengan pengalaman seseorang, semakin dewasa usia seseorang maka semakin banyak pula pengalaman yang didapatkan dan semakin bijak dalam memilih cara untuk menyelesaikan masalah yang sedang dihadapi. Semakin bertambahnya usia seseorang maka akan mulai untuk membimbing diri sendiri dan menilai diri sendiri, serta lebih fokus terhadap penerimaan penyakit yang dialaminya sehingga memiliki koping spiritual yang baik.

Menurut penelitian Guan Chong Ng (2016), menunjukkan mayoritas memiliki koping spiritual yang baik dengan koping spiritual yang baik sebanyak (64%), dan koping spiritual yang buruk sebanyak (36%). Koping spiritual dapat berdampak baik dan buruk hal ini diakibatkan dari factor internal dan eksternal. Factor internal adalah factor yang berasal dari dalam diri seseorang itu sendiri dimana dapat berupa jasmaniah dan spisikologis sedangkan factor ekternal adalah factor yang berasal dari luar diri seseorang tersebut dimana dapat berupa lingkungan keluarga, sekolah dan masyarakat.

Hasil penelitian lain Andrea Bovero (2019), menunjukkan koping spiritual yang baik pada penderita kanker dipengaruhi beberapa factor diantaranya, yaitu gangguan diri, perencanaan dan penerimaan hal tersebut diperlukan untuk memberikan dukungan psikologis pada penderita kanker. Selain itu skor pada koping spiritual meningkat dipengaruhi oleh perencanaan dan

penerimaan yang baik. Koping spiritual penderita kanker cenderung merasa ketidak adilannya tuhan terkait dengan penyakit yang dideritanya.

Pada penelitian lain oleh Jing Chen MD (2020), koping spiritual yang dirasakan pasien bisa menjadi faktor penting yang membuat timbulnya kenyamanan dalam menjalini kehidupan yang sulit sebagai bentuk cobaan dalam melakukan berbagai kegiatan pada seseorang, misalnya pasien kanker yang memiliki koping spiritual yang baik akan memiliki keyakinan dan senantiasa berserah diri kepada tuhan, sikap tersebut memberikan sikap optimis pada diri seseorang sehingga muncul perasaan positif seperti rasa bahagia, tenang, aman dan nyaman.

Koping spiritual adalah suatu cara individu menggunakan keyakinannya dalam mengelola kecemasan dan masalah-masalah dalam kehidupan. Hal ini merupakan salah satu strategi untuk meminimalisir atau mengatasi stres dan kecemasan yang muncul akibat situasi atau keadaan yang menekan melalui ibadah, lebih mendekatkan diri pada Tuhan dan cara keagamaan lainnya (Anggraini,2016)

Dari kelima artikel yang didapatkan bahwa koping spiritual adalah suatu dorongan yang menyediakan energy serta dibutuhkan individu untuk menangani penyakit kronis secara mandiri karena akan menentukan seseorang dapat menerima atau tidak terkait kondisinya, sehingga memperoleh kenyamanan dalam menjalani kehidupan dan menghilangkan ansietas atau kecemasan yang munkin dialaminya.

Koping spiritual pada pasien kanker dapat menjadi dukungan spikologis yang sangat dibutuhkan untuk mengembangkan intervensi pada individu

tertentu dan dapat membantu tenaga medis untuk mendapatkan informasi yang dibutuhkan dari segi psikologis serta kesiapan pasien untuk keterlibatan dan landasan untuk keefektifan koping *management* dalam perubahan kualitas hidup. Koping spiritual berguna dalam merencanakan dan mengkaji intervensi edukasi serta baik untuk meningkatkan kualitas hidup atau *peaceful and of life.*

5.2 Ansietas Pada Pasien Kanker

Ansietas dapat dinilai dari seberapa besar akibat yang ditimbulkan mulai dari ansietas ringan, sedang, berat dan bahkan menyebabkan hal yang lebih serius yaitu gangguan panic. Pada lima artikel yang telah dianalisis memiliki ansietas yang rendah (62,4%) dan ansietas yang tinggi (37,6%).

Pada penelitian Jing Chen MD (2020), menunjukkan ansietas kanker dalam kelompok rendah. Ansietas dapat dilihat dari segi tingkatannya dimana setiap tingkatan memiliki level yang berbeda seperti ansietas ringan, sedang, berat dan panic. Pada penelitian Guan Chong Ng (2016), penderita kanker menunjukkan skor ansietas yang rendah, hal ini dipengaruhi oleh pendidikan, status ekonomi dan usia, pendidikan dan status ekonomi menjadi dimensi yang sering dilaporkan. Selain itu ansietas yang rendah dipengaruhi usia <50 tahun dan lama menderita kanker. ansietas pada penderita kanker dikaitkan dengan status ekonomi hal ini berkaitan dengan beban yang harus ditangguang penderita penyakit kanker, seperti mahalnya biaya pengobatan dan tidak ada jaminan kesehatan yang memadai. Temuan ini menunjukkan bahwa penderita kanker pada domain sosial ekonomi perlu dipertimbangkan untuk menghindari

gangguan kesehatan mental seperti ansietas yang berkaitan dengan penurunan metabolisme.

Pada penelitian lain oleh Andrea Bovero (2019), menunjukkan ansietas kanker dalam kelompok yang tinggi. Dimana ansietas dapat dipengaruhi oleh gangguan diri, penerimaan, usia dan tingkat pendidikan. Ansietas yang tinggi pada 102 responden (67,1%) dimana penerimaan yang baik dalam diri pasien akan menghasilkan ketenangan dalam menjalani kehidupannya, penerimaan berhubungan dengan psikologis responden. Penerimaan dapat di kategorikan sebagai reaksi emosional pasien terdiagnosis kanker dimana penerimaan memiliki lima fase diantaranya, denial (penyangkalan), anger (marah), bargaining (menawar), depression (depresi) dan acceptance (penerimaan). (kuberler-ross,1969)

penelitian Beata Zarzycka, (2019), ansietas pada seseorang yang terdiagnosa kanker merupakan komponen yang wajar dan pastinya dialami oleh setiap orang, dimana dapat mencangkup rasa takut, perasaan bersalah, emosi negative, gelisah dan harapan hidup. Menjaga ansietas yang baik pada pasien kanker sangat dianjurkan dalam kehidupan sehari-hari agar dapat mempertahankan kondisi fungsional yang optimal, sehingga mereka dapat menikmati kehidupannya dengan baik.

penelitian Daniel H.Grossoehme (2018), terdiagnosa kanker pada usia remaja pastinya akan mengalami ansietas, dimana ansietas sendiri merupakan komponen yang kompleks mencangkup harapan hidup, kesehatan psikologis serta mental, kesehatan fisik, status ekonomi dan dukungan sosial. Menjaga kecemasan tetap baik pada usia remaja dengan kanker sangat dianjurkan

dalam kehidupan sehari-hari agar dapat mempertahankan kondisi fungsional yang optimal, sehingga mereka dapat menjalani kehidupan dengan baik.

Ansietas dari tingkatan ringan berhubungan dengan ketegangan dalam kehidupan sehari – hari dan menyebabkan seseorang menjadi lebih waspada dan meningkatkan lahan persepsinya, ansietas dari tingkat sedang berhubungan dengan pemusatan perhatian pada hal – hal yang penting dan mengesampingkan hal yang lainnya ansietas dari tingkatan berat ditandai dengan sempitnya persepsi seseorang, ansietas dari tingkatan yang lebih serius yaitu gangguan panic berhubungan dengan hilangnya kendali diri dan detail perhatian kurang serta ketidak mampuan melakukan apapun sekalipun dengan perintah malah akan menambah tingkat kepanikannya (Donsu, 2017).

Dari kelima artikel didapatkan bahwa ansietas sangat munkin terjadi didalam kehidupan sehari – hari tetapi dalam bidang kesehatan kita sebagai tenaga kesehatan tidak hanya dituntut untuk melakukan tindakan medis tapi juga mempertimbangkan sisi spikologis dari setiap pasien karena pada dasarnya setiap manusia itu unik berbeda antara manusia satu dengan yang lain. ansietas merupakan salah satu masalah yang sering muncul dan dialami oleh penderita kanker dimana mereka biasanya mengalami perubahan suasana hati, merasa tidak memiliki harapan, tidak berharga dan muncul bayangan kematian seperti ingin bunuh diri. ansietas yang rendah merupakan tujuan akhir dan hasil penting dari semua intervensi medis pada pasien kanker. Pasien kanker yang tidak memiliki koping yang baik mengalami ansietas yang lebih tinggi dibandingkan pasien kanker yang memiliki koping yang baik.

5.3 Analisa Koping Spiritual dan Ansietas Kanker

Berdasarkan hasil analisis dari lima artikel memiliki koping spiritual yang buruk (65,8%) dan koping spiritual yang baik (31%). Kemudian ditemukan memiliki ansietas yang rendah (62,1%) dan ansietas yang tinggi sebanyak (37,6%). Dari kelima artikel tersebut seluruhnya menunjukkan ada hubungan koping spiritual dengan ansietas dengan *p-value* <0,05.

pada penelitian Daniel H.Grossoehme (2018), menunjukkan bahwa ada hubungan yang signifikan antara koping spiritual dengan ansietas pada penderita kanker dengan *p-value 0,002*<0,005. Koping spiritual tekait dengan manajemen ansietas dalam istilah manajemen diri akan berpengaruh pada psikologis dan tentu hal ini mengurangi komplikasi sehingga menurunnya kecemasan pada penderita kanker. Sedangkan dalam penelitian Guan Chong Ng (2016), menunjukkan bahwa koping spiritual yang buruk dan ansietas yang tinggi dapat depengaruhi oleh usia, tingkat pendidikan atau pendapatan rendah dan status. Koping spiritual dapat menjadi suatu solusi terhadap ansietas seseorang baik dalam jangka panjang dan jangka pendek. Penelitian ini menunjukan bahwa koping spiritual memiliki hubungan positif dengan ansietas pada penderita kanker dengan *p-value <0.03*.

Pada penelitian lain menurut Beata Zarzycka (2019), menunjukkan bahwa koping spiritual dikaitkan dengan beberapa domain ansietas termasuk rasa takut, perasaan bersalah, emosi negatif, dan kegelisahan. Dalam temuan ini mengungkapkan koping spiritual secara signifikan memiliki hubungan dengan domain ansietas ini menunjukkan bahwa koping spiritual memiliki hubungan positif dengan ansietas *p-value <0.05*. Dalam pengembangan koping spiritual

dan ansietas berefek kepada kenyamanyan dalam beragama sehingga memunculkan harapan pada pasien kanker. Hal ini sejalan dengan penelitian Jing Chen MD (2020), menunjukkan bahwa ada hubungan yang signifikan antara koping spiritual dengan ansietas pada penderita kanker dengan konstribusi sebesar 23,3% dengan *p-value* <0,05. Dimana ansietas yang rendah cenderung memiliki koping spiritual yang baik begitu juga dengan responden yang mengalami ansietas yang tinggi cenderung memiliki koping spiritual yang rendah. Sedangkan responden yang memiliki koping spiritual yang baik tetapi mengalami ansietas yang tinggi hal ini dipengaruhi oleh beberapa faktor lain seperti kurangnya dukungan orang terdekat. Sedangkan dalam penelitian Andrea Bovero (2019), menunjukkan bahwa adanya hubungan yang signifikan antara koping spiritual dengan ansietas pada pasien kanker dengan p-value <0,01. Dimana hal ini menunjukkan bagaimana koping spiritual yang dicapai dengan memberikan makna pada kehidupan atau memulai praktik keagamaan dapat membantu untuk mengatasi ansietas.

Mekanisme koping digunakan untuk beradaptasi dengan kondisi fisik dan psikologis penderita kanker. Ott, Hanna, Jalal, & Champion (2015) menggambarkan mekanisme koping yang digunakan oleh penderita kanker antara lain : mempertahankan ‘normalitas’ seperti melakukan kegiatan rutin, mencari dukungan, penggunaan obat-obatan, menjalankan pengobatan alternatif dan terapi komplementer.

Dari kelima artikel yang didapatkan bahwa penyakit kanker merupakan penyakit kronis yang dapat menimbulkan masalah pada aspek psikologis seperti salah satunya ansietas. ansietas dan koping spiritual dapat di pengaruhi

oleh beberapa faktor yaitu usia, tingkat pendidikan yang berpengaruh terhadap proses penerimaan penyakit, status ekonomi, penghargaan yang diterima individu dari individu lain dimana hal ini bentuk dukungan psikologis terkait keberhasilan seseorang dalam mengatasi kekhawariran yang dialami dan lama menderita sehingga dapat mempelajari hal-hal yang positif dari penyakitnya serta mendapatkan kedamaian dalam menjalani kehidupannya. Koping spiritual pada penderita kanker dapat ditingkatkan dengan melakukan pendekatan spiritual melalui tokoh agama yang diyakini serta peran tenaga kesehatan selain melakukan tindakan medis juga dapat memfasilitasi pasien terkait dengan kebutuhan spiritualitasnya. Memberikan edukasi secara berkala pada pasien sehingga penderita dapat mengontrol penyakitnya serta dapat menjalani kehidupannya dengan baik dan berkualitas.

Penderita kanker memiliki koping spiritual yang baik maka hal itu bisa berdampak pada tingkat ansietas karena koping spiritual yang baik maka akan terdorong untuk menjalani kehidupannya dengan baik. Penderita kanker akan merasa lebih nyaman dengan keterbukaan, pasien membicarakan tentang kanker yang dialami sehingga akan meningkatkan pemahaman orang lain. Melalui keterbukaan, beban pasien akan berkurang dengan bentuk dukungan yang ia dapatkan dan pengertian orang lain akan masalah yang dihadapi. Pasien yang melewati proses adaptasi dengan lebih terbuka kepada orang lain dapat membantu meminimalkan peristriwa traumatic pada setiap tingkat adaptasi pasien.

Penggunaan koping yang berfokus pada masalah dihubungan dengan penurunan beban pengasuh, penurunan depresi, dan proses adaptasi yang lebih

baik, sementara koping yang berfokus pada emosi berdampak pada pertumbuhan posttraumatic yang lebih tinggi dan tekanan psikologis. Penggunakan koping adaptif akan membuat proses adapatasi menjadi lebih baik dan meminimlakan masalah psikososial yang mungkin dapat muncul.

Kanker bukan saja hanya memengaruhi pasien tapi juga akeluarga pada aspek yang berbeda dan memberikan makna atau pandangan yang berbeda juga. Pasien yang dapat bekerjasama dengan keluarga dapat membantu proses adaptasi kedua belah pihak dan menggunakan mekanisme koping yang lebih adaptif mekanisme koping dan status kesehatan secara umum. Optimism menjadi tolak ukur kemampan mengontrol status kesehatan baik pada laki-laki dan perempuan. Kondisi ini menunjukkan bahwa penggunaan mekanisme koping yang adaptif akan menghasilkan optimisme dan sikap positif sehingga meningkatkan daya tahan (resiliensi) dan kondisi emosiaonal yang baik pada penderita kanker.

BAB VI

KESIMPULAN

6.1 Kesimpulan

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

6.1.1 Koping spiritual pada klien kanker berdasarkan *literature review* dari kelima artikel menunjukkan sebagian besar memiliki koping spiritual yang baik.

6.1.2 Ansietas pada klien kanker berdasarkan *literature review* dari kelima artikel menunjukkan sebagian besar responden mengalami ansietas yang rendah.

6.1.3 Hasil analisis Hubungan Koping Spiritual dan Ansietas pada Klien Kanker berdasarkan *literature review* dari kelima artikel, terdapat 5 lima artikel yang memiliki hubungan yang signifikan antara koping spiritual dengan ansietas dengan *p-value* <0.05.

1.2 Saran

1.2.1 Bagi Peneliti

Diharapkan koping spiritual dapat menambah dan di aplikasikan pada saat melakukan asuhan keperawatan dengan ansietas pada klien kanker

1.2.2 Bagi tenaga kesehatan

Diharapkan literatur review ini bisa di terapkan kepada klien kanker yang mengalami anxietas saat melakukan asuhan keperawatan khususnya keperawatan medikal bedah.

1.2.3 Bagi Institusi pendidikan keperawatan

Diharapkan literatur review ini dapat menambah bahan referensi bagi instusi pendidikan mengenai koping spiritual sebagai alternatif untuk mengurangi axietas pada klien kanker.

1.2.4 Bagi peneliti selanjutnya

Bagi peneliti selanjutnya perlu melakukan penelitian langsung terkait koping spiritual sebagai alternatif untuk mengurangi axietas pada klien kanker.

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Lampiran 1 : PRISMA CHECKLIST

Section/topic	#	Checklist item	Reported on page #
TITLE			
Title	1	Identify the report as a systematic review, meta-analysis, or both.	
ABSTRACT			
Structured summary	2	Provide a structured summary including, as applicable: background; objectives; data sources; study eligibility criteria, participants, and interventions; study appraisal and synthesis methods; results; limitations; conclusions and implications of key findings; systematic review registration number.	
INTRODUCTION			
Rationale	3	Describe the rationale for the review in the context of what is already known.	
Objectives	4	Describe the rationale for the review in the context of what is already known.	
METHODS			
Protocol and registration	5	Indicate if a review protocol exists, if and where it can be accessed (e.g., Web address), and, if available, provide registration information including registration number.	
Eligibility criteria	6	Indicate if a review protocol exists, if and where it can be accessed (e.g., Web address), and, if available, provide registration information including registration number.	
Information sources	7	Indicate if a review protocol exists, if and where it can be accessed (e.g., Web address), and, if available, provide registration information including registration number.	
Search	8	Present full electronic search strategy for at least one database, including any limits used, such that it could be repeated.	
Study selection	9	State the process for selecting studies (i.e., screening, eligibility, included in systematic review, and, if applicable, included in the meta-analysis).	

Data collection process	10	Describe method of data extraction from reports (e.g., piloted forms, independently, in duplicate) and any processes for obtaining and confirming data from investigators.	
Data items	11	List and define all variables for which data were sought (e.g., PICOS, funding sources) and any assumptions and simplifications made.	
Risk of bias in individual studies	12	Describe methods used for assessing risk of bias of individual studies (including specification of whether this was done at the study or outcome level), and how this information is to be used in any data synthesis.	
Synthesis of results	13	State the principal summary measures (e.g., risk ratio, difference in means).	
Synthesis of results	14	Describe the methods of handling data and combining results of studies, if done, including measures of consistency (e.g., I2) for each meta-analysis.	

Lampiran 2 : Artikel

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ORIGINAL PAPER

The Spirituality in End-of-Life Cancer Patients, in Relation to Anxiety, Depression, Coping Strategies and the Daily Spiritual Experiences: A Cross-Sectional Study

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Abstract
This study aimed to investigate "Faith" and "Meaning/Peace" dimensions of the functional assessment of chronic illness therapy–spiritual well-being scale (FACIT-Sp-12) in relation to coping strategies, anxiety and depression, and to analyze the relationship between FACIT-Sp-12 and the daily spiritual experience scale in end-of-life cancer patients. A sample of 152 participants were involved. The daily spiritual experiences correlated the most with "Faith" subscale. Moreover, religious coping, depression and daily spiritual experiences resulted "Faith" significant predictors, while depression, anxiety, self-distraction, positive reframing and behavioral disengagement were "Meaning/Peace" subscale's significant predictors. These findings highlighted the considerable impact of the daily spiritual experiences on patients' spiritual well-being.

Keywords Spiritual well-being · FACIT-Sp-12 · Daily spiritual experiences · End of life

Introduction

An interest regarding cancer patients' spirituality and religion has grown over the past few decades. At the end of life, themes such as death, the meaning of life, the purpose of life and the dimension of the transcendence become more significant, and an increasing emphasis is being put on patients' spiritual well-being (Balboni et al. 2009; Shin et al. 2017). The fact that an increasing number of cancer patients

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identify themselves as spiritual but not as religious people supports the relevance of implementing research in this field (Shahabi et al. 2002; Peterman et al. 2014). At this moment, no definition of spirituality is universally accepted, and no consensus exists on this dimension within health research (Monod et al. 2011). When discussing spirituality, it is important to make a distinction between this concept and the religiosity one. Although it has been argued that spirituality can only exist in deeply religious people (Koenig 2008; Koenig et al. 2012), a lot of studies proposed a theoretical distinction between these two constructs (Hill et al. 2000; Sulmasy 2006). From this perspective, religiousness is defined as the participation in institutionally sanctioned activities of specific religious groups, linked to beliefs which are also institutionally sanctioned, whereas spirituality is more frequently defined as the feeling stemming from the person's connection with the transcendent dimension of the existence, i.e., the meaning or the sense of purpose (Peterman et al. 2002). Besides, spirituality is a cultural-related concept. Each cultural framework influences spirituality, which can be considered as the peculiar expression of the relationship between people and the transcendent. As stated by Koenig in Handbook of Religion and Health (2012), "Spirituality is distinguished from all other aspects of humanism, values, morals and mental health by its connection to that which is sacred—the transcendent. The transcendent is that which is outside of the self, and yet also within the self; in Western traditions, it is called God, Allah, HaShem or a Higher Power. In Eastern traditions, it may be called the Brahma, Buddha, Dao, or ultimate truth/reality." There is evidence, from North American studies, of the differences between Caucasian, Latino and African-American populations, in how they conceptualize spirituality (Selman et al. 2011). Researches on spiritual well-being have found that the distinctions in religious beliefs may reflect the cultural, racial and ethnic differences in cancer patients (Moadel et al. 2007; Simon et al. 2007; Murphy et al. 2010). These findings suggest that culture should be taken into account when assessing spirituality. Instead, with regard to the cultural differences, the literature showed that, when nearing death, the end-of-life spiritual needs become universal (Milligan 2004). Spiritual well-being is considered a determinant factor influencing the patients' Quality of Life (QoL) and, as a multidimensional concept, comprehends different dimensions such as faith, meaning of life and peace of mind (Dong et al. 2017). One of the most used tools to evaluate the spiritual well-being experienced by end-of-life patients is the functional assessment of chronic illness therapy–spiritual well-being (FACIT-Sp-12) (Brady et al. 1999). This questionnaire is composed by two scales: the first one is linked to the patient's existence, the search of one's own personal meaning of life, and the sense of peace and purpose in life (Spilka and McIntosh 1996; Nelson et al. 2002) and can be understood as the "personal experience of the transcendent" (Spilka and McIntosh 1996), and the second one is defined as "the attendance to faith, rituals and activities of the traditional religion" (Elkins et al. 1988) and is therefore linked to faith and religion (Spilka and McIntosh 1996; Nelson et al. 2002). The FACIT-Sp-12 has been cross-culturally validated and translated in fourteen languages, in different countries and populations with different religious traditions and spiritual background (Akturk et al. 2017). As referred by a recent review on instruments assessing spirituality used in the clinical research, the FACIT-Sp-12 emerged as the most validated questionnaire (Monod

et al. 2011). The assessment of spiritual well-being emerged as a relevant factor for patients' QoL and health. Due to the multidimensional nature of spirituality, the literature presents many studies, concerning: the association between spiritual well-being and QoL (Brady et al. 1999; Mytko and Knight 1999; Bai et al. 2015; Bovero et al. 2016; Munoz et al. 2015; Rabow and Knish 2015), the relationship between spirituality and depression (Nelson et al. 2009; Bekelman et al. 2010; Brown et al. 2015), the role of faith in cancer adjustment (Pargament et al. 2004; Ramirez et al. 2012; Harris et al. 2013; Trevino et al. 2014) and the effect of the spiritual coping on QoL (Tarakeshwar et al. 2006; Valluripalli et al. 2012). These studies explored spirituality in many diverse types of patients, i.e., advanced cancer patients, patients with a current or past diagnosis of cancer, terminally ill cancer patients, cancer survivors, cancer patients receiving both oncological and palliative care, patients with HIV infection or AIDS, outpatients with chronic heart failure, patients in hemodialysis, medically ill elderly patients and older adults with advanced chronic illness.

With regard to advanced cancer patients' spiritual well-being, the study conducted by Renz and colleagues (Renz et al. 2015) highlighted that the attention devoted to the spiritual experience of the transcendence may complement current clinical approaches based on the patients' needs. An assessment of the patients' daily spiritual experiences has emerged as a relevant element to provide an individualized spiritual care. In this regard, the daily spiritual experiences refer to the individual's emotional perception of the transcendent in daily life (Hood et al. 1996) that may be evoked by religious beliefs or by ordinary events (Ng et al. 2009). The daily spiritual experiences are represented by the direct and regular individual encounters with the dimension of the transcendence rather than the person's specifically religious beliefs or behaviors. Starting from this theorization, Underwood and Teresi developed a tool, the daily spiritual experiences scale (DSES) (2002), to measure this experiential component of religiousness and spirituality. The peculiarity of this questionnaire is the ability to measure the daily spiritual life in its emotional and experiential details, rather than in its cognitive aspects, with the aim to investigate these experiences among various religious and spiritual traditions (Underwood 2006). In the literature, it has been evidenced that the DSEs positively influence the lifestyle of patients who survived cancer (Park et al. 2009) and highlighted their involvement in the pain control during cancer active treatments (Lo et al. 2016). In fact, as evidenced in these two studies, daily spiritual experiences enhance the QoL in terms of self-care, healthy behaviors, quality of social relationships and better emotional well-being as a source of strength and comfort when facing cancer experience. Participants belonging to different religions considered their daily spiritual experiences as intense and powerful circumstances characterized by an altered body awareness, less pain, less distress, a better acceptance of the illness or of death (Renz et al. 2015). Moreover, the DSEs have been studied in a Jewish population (Kalkstein and Tower 2009) and in a sample of patients with a non-oncological chronic illness (Koenig et al. 2016). Furthermore, the DSES improves the evaluation of spiritual well-being when combined with other scales, because it provides deeper information about how spiritual experiences and psychological and physical well-being are related to each other (Underwood 2006). There are no studies in the literature investigating spirituality through DSEs in a sample of terminal cancer patients.

Therefore, our study originated from the following premises: (1) a previous study conducted on a sample of terminally ill cancer patients (Bovero et al. 2016), which found only the "Faith" FACIT-Sp-12 subscale as a predictor of the quality of life, highlighted that the two spirituality dimensions characterizing patients' well-being could be associated in different ways to other psychological variables; (2) it is necessary to promote further studies on the terminal cancer patients' spiritual well-being, given the importance of this topic as a multidimensional concept. So, the aims of the study were: (1) to explore the relationship between the two FACIT-Sp-12 subscales and coping strategies, anxiety and depression, and the relationship between the two subscales and a set of socio-demographic variables, such as age, sex, religious affiliation and religious practice, and (2) to analyze the relationship between the DSEs and the two dimensions identified by the FACIT-Sp-12 ("Meaning/Peace" and "Faith"), in a dying cancer patients' sample.

Methods

Setting and Sample

Patients were recruited from November 2015 to November 2016, at "Città della Salute e della Scienza" Hospital of Turin. All the participants were hospitalized, diagnosed with cancer, had a life expectancy of few weeks and had a Karnofsky Performance Status (KPS) (Karnofsky and Burchenal 1949) of 50 or lower. To be eligible for participating in the study, patients were asked to complete a brief cognitive assessment using the Mini Mental State Examination (MMSE) (Folstein et al. 1975). Those who obtained a score of 19 or less indicating cognitive impairment (Folstein et al. 1975) were excluded from the study, because they might not be able to provide a valid informed consent or give accurate answers to the study instruments. Patients who were unable to speak Italian fluently or who had a severe mental disorder were also excluded from the study. The study was conducted in accordance with principles embodied in the Declaration of Helsinki. The study was approved by "Comitato Etico Interaziendale A.O.U. San Giovanni Battista di Torino A.O. C.T.O./Maria Adelaide di Torino": protocol number 0073054, procedure number 255, date of approval: 04/14/15. Informed consent was obtained from all the participants included in the study. Of the 197 screened patients, 45 were not included in the study: 23 did not meet the inclusion criteria, 14 declined to participate in the research, and eight had incomplete data. The final sample counted 152 inpatients. A study investigator (AB) interviewed the participants at their bedside through the Italian validated versions of self-report and clinician-rated tests, in one or two sessions, within 3 days after their admission to the hospital. Clinical data were collected in a medical chart, while socio-demographic information and the data of the variables, chosen to be investigated, were gathered through a semi-structured oral interview and a set of self-administrated rating scales.

Measures

Functional Assessment of Chronic Illness Therapy—Spiritual Well-Being

FACIT-Sp-12 is the most commonly used tool to measure spiritual well-being in cancer patients (Peterman et al. 2002). It is composed by 12 items, underlying two factors ("Meaning/Peace" and "Faith") (Brady et al. 1999). A peculiar characteristic of this scale is that the wording of the items does not assume a belief in God. Therefore, it can be completed comfortably by an atheist or an agnostic yet touches both traditional religiousness dimensions ("Faith" factor) and spiritual ones ("Meaning/Peace" factor). "Faith" factor contains four items and measures the comfort and strength derived from one's faith. "Meaning/Peace" factor contains eight items and assesses the sense of meaning, peace and purpose in one's life. All the items are rated on a five-point Likert scale and range from zero (not at all) to four (very much). The total score ranges from zero to 48, with higher scores representing greater levels of spirituality.

Daily Spiritual Experiences Scale

The Daily Spiritual Experiences Scale (DSES) (Underwood and Teresi 2002; Underwood 2006) evaluates the personal perception of the transcendence (God, the divine) in daily life and the personal perception of the interaction or of the involvement with the transcendence. It is composed of 16 items and is considered as a unidimensional measure, although the items are grouped as theistic and non-theistic. The first 15 items are rated on a six-point Likert scale and range from one (many times a day) to six (never or almost never). Item 16 ("In general, how close do you feel to God?") is answered on a four-point Likert scale (1 = *not at all* to 4 = *as close as possible*). The total score varies from 16 to 94. Lower scores indicate a higher frequency of the spiritual experiences (Underwood 2006, 2011).

Brief Coping Orientation to Problem Experienced

The Brief Coping Orientation to Problem Experienced (Brief COPE) is a 28-item self-report measure used to assess specific coping strategies (Carver 1997). The items are designed to measure 14 conceptually different coping reactions: active coping, planning, positive reframing, acceptance, humor, religion, use of emotional support, use of instrumental support, self-distraction, denial, venting, substance use, behavioral disengagement and self-blame. Each coping scale consists of two items, rated on a four-point Likert scale (from 1 "I have not been doing this at all" to 4 "I have been doing this a lot").

Hospital Anxiety and Depression Scale

The Hospital Anxiety and Depression Scale (HADS) is a 14-item self-report scale, which presents two dimensions: depression and anxiety (Zigmond and Snaith 1983). The two subscales are both composed of seven questions. The patients rate the

severity of the problems described by the items on a four-point Likert scale ranging from zero to three. The HADS has been validated for its use on cancer patients (Costantini et al. 1999; Bjelland et al. 2002). Scores of eight or more are considered as an indicator of a significant clinical symptomatology (Castelli et al. 2011).

Data Analysis

Descriptive statistics were used to analyze the socio-demographic and clinical characteristics of the sample. Associations between "Meaning/Peace" and "Faith" FACIT-Sp-12 subscales and daily spiritual experiences, coping styles, anxious/depressive symptomatology and age were explored using Pearson's correlations. Two standard multiple linear forced entry regression models were executed to identify "Meaning/Peace" and "Faith" FACIT-Sp-12 subscales predictors and to detect which one gave more contribution to the explanation of the two dependent variables' variance. Then, after choosing the predictors with the highest β coefficients, two standard multiple block-wise regression models followed, to further analyze their predictive ability of the dependent variables. The association of "Meaning/Peace" and "Faith" FACIT-Sp-12 subscales with sex, individual religious practice and beliefs were analyzed through t test and one-way ANOVA. All the assumptions of the tests were verified. The tests were two-sided. Bonferroni correction for multiple comparisons was applied and p values less than .003 were considered statistically significant. Statistical analysis was executed using the software SPSS Statistics Version 24.0 (IBM Corp. Armonk, NY, USA).

Results

Socio-Demographic and Clinical Characteristics of the Sample

See Table 1.

Spirituality

Regarding the FACIT-Sp-12 subscales, sample's mean score on the "Meaning/Peace" factor was 17.28 (SD = 4.76) and mean score on the "Faith" factor was 5.58 (SD = 2.93). About the total score at the FACIT-Sp-12, sample obtained a mean score of 22.86. (SD = 6.35).

Anxiety and Depression

The HADS results highlighted that the 67.1% ($n = 102$) of the sample presented clinically relevant anxious symptomatology (mean = 8.75, SD = 2.74) and that the 86.8% ($n = 132$) had clinically relevant depressive symptomatology (mean = 11.27, SD = 3.38).

Table 1 Socio-demographic and clinical characteristics of the sample

		n (%)	Mean	SD
Age			74.78	11.37
Sex	Male	81 (53.3)		
	Female	71 (46.7)		
Marital status	Single	25 (16.5)		
	Married	85 (55.9)		
	Divorced	6 (3.9)		
	Widow(er)	35 (23)		
	Missing	1 (0.7)		
Educational level	Primary	57 (37.5)		
	Secondary	39 (25.7)		
	Higher secondary	18 (11.8)		
	Graduate	2 (1.3)		
	Missing	36 (23.7)		
Profession	Unemployed	2 (1.3)		
	Employee	17 (11.2)		
	Freelance	4 (2.6)		
	Housewife	1 (0.7)		
	Retired	128 (84.2)		
Caregiver	Spouse	55 (36.2)		
	Son/daughter	57 (37.5)		
	Relative	16 (10.5)		
	Friend	2 (1.3)		
	Nobody	21 (13.8)		
	Legal tutor	1 (0.7)		
Religious affiliation	Catholic, practicing	114 (75)		
	Catholic not practicing	17 (11.2)		
	Atheist	12 (7.8)		
	Protestant	1 (0.7)		
	Evangelic	1 (0.7)		
	Missing	7 (4.6)		
Individual religious practice	Pray	93 (61.2)		
	Do not pray	53 (34.9)		
	Missing	6 (3.9)		

Table 1 (continued)

		n (%)	Mean	SD
Type of cancer	Colon–rectal	32 (21.1)		
	Breast	11 (7.2)		
	Uterus–ovary	4 (2.6)		
	Gastrointestinal	10 (6.6)		
	Lung	46 (30.3)		
	Head–neck	5 (3.3)		
	Hepatic–pancreatic VBP	13 (8.6)		
	Prostate	14 (9.2)		
	Onco-hematology	5 (3.3)		
	Dermatological	5 (3.3)		
	Osseous soft tissue	3 (1.9)		
	CNS	2 (1.3)		
	Other	2 (1.3)		
Stage	Local	40 (26.3)		
	Loco-regional	10 (6.6)		
	Metastatic	101 (66.4)		
	Missing	1 (0.7)		
KPS			32.75	8.61

n absolute frequencies, *SD* standard deviation

Daily Spiritual Experiences

Patients got a DSES mean score of 51.96 (SD = 15.12).

Coping Styles

The most frequently used coping styles were: self-distraction (mean = 6.45, SD = 1.26), instrumental support (mean = 6.03, SD = 1.21), emotional support (mean = 6.03, SD = 1.16), active coping (mean = 5.54, SD = 1.33), positive reframing (mean = 5.36, SD = 1.19), venting (mean = 5.32, SD = 1.08), planning (mean = 5.24, SD = 1.47), acceptance (mean = 5.05, SD = 1.32) and religion (mean = 4.94, SD = 1.67).

All the results are reported in Table 2.

Associations Between "Meaning/Peace" and "Faith" FACIT-Sp-12 Subscales, Anxiety, Depression and Coping Styles

"Meaning/Peace" FACIT-Sp-12 subscale significantly correlated with depression ($r = -.622$, $p < .001$), anxiety ($r = -.566$, $p < .001$), and the behavioral

Table 2 Descriptive analysis of the sample's scores on the scales

		n (%)	Mean	SD
DSES			51.96	15.12
Brief-COPE	Positive reframing		5.36	1.19
	Self-distraction		6.45	1.26
	Venting		5.32	1.08
	Using instrumental support		6.03	1.21
	Active coping		5.54	1.33
	Denial		3.27	1.22
	Religion		4.94	1.67
	Humor		2.93	1.20
	Behavioral disengagement		3.93	1.45
	Using emotional support		6.03	1.16
	Substance use		2.28	1.01
	Acceptance		5.05	1.32
	Planning		5.24	1.47
	Self-blame		2.95	1.30
HADS	Anxiety	102 (67.1)†	8.75	2.74
	Depression	132 (86.8)†	11.27	3.38
FACIT-Sp-12	Meaning/peace		17.28	4.76
	Faith		5.58	2.93
	Total score		22.86	6.35

n absolute frequencies, *SD* standard deviation

†absolute and percent frequencies of patients who had HADS scores over the cutoff (≥ 8)

disengagement ($r = -.369$, $p < .001$), acceptance ($r = .418$, $p < .001$), active coping ($r = .395$, $p < .001$), self-distraction ($r = .390$, $p < .001$), positive reframing ($r = .386$, $p < .001$), planning ($r = .335$, $p < .001$) and humor ($r = .288$, $p < .001$) coping styles.

"Faith" FACIT-Sp-12 subscale significantly correlated with depression ($r = -.275$, $p < .01$), and the religious ($r = .721$, $p < .001$), positive reframing ($r = .679$, $p < .01$), emotional support ($r = .394$, $p < .001$) and instrumental support ($r = .384$, $p < .001$) coping styles.

Associations Between "Meaning/Peace" and "Faith" FACIT-Sp-12 Subscales and the Daily Spiritual Experiences Scale (DSES)

DSES scores significantly correlated with the "Faith" FACIT-Sp-12 subscale ($r = .679$, $p < .001$), but did not with the "Meaning/Peace" FACIT-Sp-12 subscale. ($r = .184$, $p < .05$).

"Meaning/Peace" and "Faith" FACIT-Sp-12 Subscales Predictors

The forced entry regression models identified depression, anxiety, self-distraction, positive reframing, behavioral disengagement, acceptance and active coping as the "Meaning/Peace" FACIT-Sp-12 subscale significant predictors and religious coping, depression, daily spiritual experiences, instrumental support and emotional support as the "Faith" FACIT-Sp-12 subscale significant predictors. Then, block-wise regression models showed that acceptance, active coping, instrumental support and emotional support minimally contributed ($\beta < .200$) to the explanation of the variance of the FACIT-Sp-12 subscales. So, the principal and most explicative "Meaning/Peace" FACIT-Sp-12 subscale predictors were: depression, anxiety, self-distraction, positive reframing and behavioral disengagement. The principal and most explicative "Faith" FACIT-Sp-12 subscale predictors were: religious coping, depression and daily spiritual experiences.

The block-wise regression models are reported in Tables 3 and 4.

Associations Between "Meaning/Peace" and "Faith" FACIT-Sp-12 Subscales and the Socio-Demographic Variables

The analysis evidenced significant associations between the "Faith" FACIT-Sp-12 subscale and sex ($t = -2.862$, $p = .003$), individual religious practice ($t = 5.872$, $p < .001$) and religious affiliation ($F = 9.123$, $p < .001$). Being female, conducting an individual religious practice and having a religious affiliation were associated with a greater spiritual well-being linked to faith.

Table 3 "Faith" FACIT-Sp-12 subscale significant predictors

	B	SE B	β
Step 1			
Constant	.894	.117	
Coping style religion	.278	.022	.716[a]
Step 2			
Constant	1.163	.170	
Coping style religion	.209	.027	.537[a]
Depression	−.048	.010	−.250[a]
Daily spiritual experiences	.012	.003	.277[a]

Summary of standard multiple linear block-wise regression

$R^2 = .512$ for Step 1, $\Delta R^2 = .127$ for Step 2 ($p < .001$). $n = 152$

b unstandardized regression coefficients, *SE B* standard error B, β standardized regression coefficients

[a]*p* value < .003

Table 4 "Meaning/Peace" FACIT-Sp-12 subscale significant predictors

	B	SE B	β
Step 1			
Constant	27.124	1.068	
Depression	− .876	.091	− .622*
Step 2			
Constant	29.475	1.113	
Depression	− .634	.099	− .451*
Anxiety	− .580	.122	− .334*
Step 3			
Constant	19.235	2.233	
Depression	− .450	.091	− .319*
Anxiety	− .468	.110	− .269*
Self-distraction	.873	.212	.232*
Positive reframing	.841	.216	.213*
Behavioral disengagement	− .751	.184	− .229*

Summary of standard multiple linear block-wise regression

$R^2 = .387$ for Step 1, $\Delta R^2 = .83$ for Step 2, $\Delta R^2 = .137$ for Step 3 ($p < .001$). $n = 152$

b unstandardized regression coefficients, *SE B* standard error B, β standardized regression coefficients

*p value < .003

Discussion

The purpose of this study was to examine the relationship between the two dimensions of spirituality ("Meaning/Peace" and "Faith") and coping strategies, anxiety and depression, and a set of socio-demographic variables and to investigate the relationship of the two subscales with the daily spiritual experiences, as referred by end-of-life cancer patients in hospital.

Firstly, it is relevant to evidence that our sample obtained mean scores on the FACIT-Sp-12 lower than those reported by other studies analyzing samples of oncological patients with different clinical features. Specifically, samples of not advanced/advanced cancer patients under curative treatments (Meaning/Peace: 29.5 ± 3.03/23.56 ± 3.4; Faith: 7.16 ± 4.45; 11.91 ± 4.5) (Bai et al. 2015; Akturk et al. 2017) and of long-term cancer survivors (Meaning/Peace: 25.65 ± 5.74; Faith: 11.70 ± 4.35) (Munoz et al. 2015) showed higher mean scores than ours, composed by end-of-life cancer patients with a life expectancy of few weeks (Meaning/Peace: 17.28 ± 4.76; Faith: 5.58 ± 2.93). Data suggested that the spiritual well-being both linked to Meaning/Peace and to faith reduces when patients' clinical conditions worsen and in nearing death. This supports the strong clinical relevance of detecting and treating spiritual suffering in dying patients.

Concerning the first aim of the study, our results supported past researches, which suggested that both the "Meaning/Peace" and "Faith" factors were negatively correlated with depression (Nelson et al. 2009; Bekelman et al. 2010; Salsman et al.

2011; Brown et al. 2015). However, the "Faith" dimension emerged as the construct that was negatively associated with it the most. These findings suggest how spiritual well-being, achieved by giving a meaning to life or through a religious practice, is helpful to cope with depression. These data are contrary to other studies which underlined that only the search of meaning was a predictor of the level of depression (Brady et al. 1999; Salsman et al. 2011; Bai et al. 2015). Moreover, it endorsed a previous study that pointed out that private religious practice might be a buffer for depression (Bovero et al. 2012). Data concerning anxiety showed that it is a negative predictor of the "Meaning/Peace" factor. The fact that spirituality was correlated with depression and anxiety underlined the significant role of the spiritual state for the daily clinical practice in palliative care and for the preservation or improvement in the emotional distress, such as in the control of symptoms. In fact, it seems that helping terminal cancer patients establishing "Meaning/Peace" in their lives may be beneficial for treating anxiety (Bovero et al. 2016), while those patients, who are open to religious experiences, may benefit from being referred to an appropriate religious support in order to face depression. These results suggested that, with dying patients, it is necessary to deal with their spiritual concerns not only by asking about them, but also by considering the potential impact of the emotional distress of them. Furthermore, taking care of patients' spirituality means analyzing which one of the two dimensions is predominant, regarding one's own personal spiritual well-being, in order to prevent anxiety or depressive symptomatology. A further difference between the two dimensions of the spiritual well-being has been found in the relationship with different coping strategies that patients can adopt at the end of life. In this study, the religious coping style was significantly associated with the "Faith" component of spirituality. This finding supports the work of Pargament and colleagues, who studied various aspects of the religious coping (2004). Dying patients may find great comfort in their faith while facing apparently uncontrollable distress. Positive reframing coping style was a significant predictor of the "Meaning/Peace" factor. This finding showed that those patients who can find a new meaning for their situation, by looking at it from a distinct perspective—for instance from a transcendental point of view—or by trying to get the best out of it, tend to have a higher level of spiritual well-being. Self-distraction and behavioral disengagement coping styles were, respectively, positive and negative predictors of the "Meaning/Peace" FACIT-Sp-12 subscale. The results regarding the coping styles evidenced how dying cancer patients, who used coping strategies such as religion, positive reframing and self-distraction, were more able to find strength while dealing with imminent death, either by appeasing emotional distress or by modifying their own perception of the clinical situation (Desbiens and Fillion 2007). Finally, data analysis showed that sex was significantly associated with the "Faith" FACIT-Sp-12 subscale. This result was consistent with the literature. In fact, women were reported to find more strength and comfort in faith, by attending to religious services and participating in prayer every day or more than once a day, and reported a higher use of the religious coping against daily stressors with respect to men (Kalkstein and Tower 2009; Strada et al. 2013; Munoz et al. 2015).

The other aim of this study was to examine the relationship between the daily spiritual experiences and patients' spiritual well-being. In this regard, findings

suggested that experiencing the transcendence, feeling in touch with the divine, is strictly linked to an enhanced spiritual well-being. Specifically, the personal perception of the transcendence (God, the divine) in the daily life was associated with the "Faith" FACIT-Sp-12 subscale, for which it resulted a significant predictor, as opposed to the "Meaning/Peace" FACIT-Sp-12 subscale. This result highlights that perceived daily spiritual experiences contribute directly to an increased level of patients' spiritual well-being, represented by the Faith dimension. These data could be explained by the characteristics of the sample: the majority of practicing Catholics and the advanced age of the sample lead to the consideration that the religious traditional cultural background is deeply settled in. Therefore, the daily spiritual experiences, such as feeling touched by the beauty of the creation or feeling a desire to be closer or in union with God, may represent a source of strength, in terms of copying styles, for terminal cancer patients who are experiencing the end of their life. The results obtained from the administration of the DSES test suggested that the DSES and the FACIT-Sp-12, used together, may contribute, through additional information, to the assessment of spiritual well-being in end-of-life patients. Furthermore, the results highlighted the relevance of the integration of therapeutic interventions regarding spirituality, as a multidimensional aspect, in the palliative care, because of its implications for the clinical practice with dying cancer patients.

This study has some limitations. Firstly, the study design is cross-sectional, measuring variables in a single cohort one time, and the nature of the study is essentially descriptive. Secondly, the cross-sectional methodology does not allow to assess if end-of-life patients experienced changes in the spirituality dimensions, while approaching death. Finally, the sample was largely composed by participants who were old and Catholics; therefore, the generalization of these results to other cancer patients' populations is not possible. There are evidences that suggest a different role of religion and spirituality in people coming from different ethnic and cultural backgrounds. Furthermore, although the statistic models were developed by entering quite a large set of adjusted predictors, there may be incomplete adjustment or unforeseen confounders that were not considered. Further studies might use the FACIT-Sp-12, by dividing the "Meaning/Peace" factor into two subscales, such as "Meaning" and "Peace," as proposed by some recent studies (Canada et al. 2008; Whitford and Olver 2012; Peterman et al. 2014), along with the DSES, which could allow a better understanding of how religiosity and spirituality influence patients' health outcomes.

Conclusions

This research suggested that the spiritual well-being is a multidimensional domain of the palliative care. It includes the search of the meaning of life, the faith, and the spiritual beliefs and pushes toward the transcendence, the absolute. Moreover, the findings of this study highlighted that the daily spiritual experiences significantly affect the spiritual well-being in the end-of-life patients and contribute to the patients' psychological health state. As suggested by Underwood (2006), analyzing how DSEs and other mental and physical well-being aspects are related contributes

to get more useful clinical information. Therefore, this is the first known study that uses the DSES in an end-of-life cancer patients sample and it has shown that the FACIT-Sp-12 and DSES can be used together to perform quantitative surveys on spirituality. Future researches would benefit from the combined use of several different spiritual well-being screening tools, such as the DSES and the FACIT-Sp-12.

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Compliance with Ethical Standards

Conflict of interest All the authors declare that they have no conflict of interest.

Ethical Approval All procedures performed in the study were in accordance with the ethical standards of the institutional research committee and with the 1964 Helsinki Declaration and its later amendments or comparable ethical standards.

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ORIGINAL PAPER

Anxiety and Depression in Cancer Patients: The Association with Religiosity and Religious Coping

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Abstract There is a lack of studies looking into religiosity and religious coping in cancer patient. In this cross-sectional study, we examined the religiosity using Duke University Religion Index, religious coping using Brief Religious Coping Scale, anxiety and depression based on Hospital Anxiety and Depression Scale among 200 cancer patients. The association between religiosity and religious coping with anxiety and depression was studied. The findings showed that subjects with anxiety or depression used more negative religious coping and had lower non-organization religiosity. Hence, measurements in reducing negative religious coping and encouraging religious activities could help to reduce psychological distress in cancer patients.

Keywords Anxiety · Depression · Religious coping · Religiosity · Cancer

Introduction

It is estimated that 20–40 % of the cancer patients have significant distress (Derogatis et al. 1983; Jørgensen et al. 2016). The cause is often multifactorial where issues relating to the physical symptoms, psychosocial and practical concerns. The distress levels may depend on the type and stage of cancer. Its severity tends to fluctuate over the course of the cancer duration and often peak at the initial diagnosis, recurrence, development of treatment-related side effects, having uncontrolled pain and fatigue as well as while experiencing psychosocial stressors. How well cancer patients cope with their distress depends on their

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interpersonal and intrapersonal resources and the medical context of the disease itself as discussed by (Jimmie and Julia 1989).

Religion refers to an organized system of beliefs, practices and ways of worship (Emblen 1992). There is a growing body of evidence that religious commitment or religiosity can buffer depression and support the healing process in medical illness (Koenig et al. 1998a; Greeson et al. 2015; Ronneberg et al. 2016), leading to greater life satisfaction and improved psychological health (McCullough et al. 2000; Aukst-Margetić et al. 2002) Religiosity is multidimensional sociological term. It covers different aspects such as involvement in religion activities, intrinsic faith, belief, religious attitudes and practices, and religious identification and affiliation (Musick et al. 1998; Garssen and de Jager Meezenbroek 2007; Hood et al. 1996). Various studies have shown that cancer patients turned to religion during distress and depression. There is strong association between religiosity and religious coping. However, it should be clear that 'having a strong religious identification' and 'engaging in religious types of coping' are by no means identical to each other (Block 2006).

Religious coping has increasingly become an area of much interest in terms of helping patients adjust with cancer. Tix and Frazier (1998) defined religious coping as 'the use of cognitive and behavioural techniques, in the face of stressful life events, that arise out of one's religion or spirituality.' Positive religious coping is seen as an expression of a secure relationship with a supportive God/higher power, whereas negative religious coping (or 'religious struggle') is considered as an expression of a less secure relationship with a God/higher power that is distant and punishing or as a religious struggle in the search for significance (Pargament et al. 1998a). The authors further elaborated the five main functions of religion in coping: (i) to give meaning to an event; (ii) to provide a framework to achieve a sense of control over a difficult situation; (iii) to provide comfort during times of difficulty; (iv) to provide intimacy with other likeminded people; and (v) to assist people in making major life transformations (Pargament et al. 2000).

The growing literature showed mixed results on the association between religious coping and cancer distress (Trevino et al. 2014; Rohani et al. 2015; Zamanian et al. 2015). In a systematic review of 17 studies examining religious/spiritual coping strategies in cancer adjustment, Thuné-Boyle et al. (2006) found seven of the studies showed some evidence for the beneficial effect of religious coping, with one study showing religious coping to be detrimental in a subgroup of their population. Three studies found religious coping to be harmful, and seven did not find any significant results. However, many studies in the review had methodological problems, and the studies failed to control for possible influential variables such as stage of illness and perceived social support. Therefore, the authors concluded that any firm conclusions about the possible beneficial or harmful effects of religious coping with cancer could not be made.

A recent study by Trevino et al. (2012) found showed that among the 48 veteran cancer survivors, those with negative religious coping were associated with greater distress and poorer posttraumatic growth, whereas positive religious coping was associated with greater posttraumatic growth (Trevino et al. 2012). Other studies confirmed that better emotional adjustment, interpersonal functioning and quality of life in cancer patients were associated with positive religious coping (Gall 2004; Stanton et al. 2002; Tarakeshwar et al. 2006; Rand et al. 2011). On the other hand, negative religious coping has been consistently associated with greater psychological distress, lower levels of life satisfaction and quality of life in people with cancer (Tarakeshwar et al. 2006; Hebert et al. 2009). The similar findings were shown in a study conducted in Malaysia which involved 228 psychiatric patients. The authors concluded that negative religious coping or lower religious

commitment was associated with higher psychological distress among the patients with any psychiatric diagnoses (Nurasikin et al. 2012).

Malaysia has a multiethnic population comprising of Malay, Chinese and Indian with Islam being the predominant religion. Other religions such as Christianity, Buddhism and Hinduism are widely practiced by other races. There were limited studies on religiosity or religious coping in Malaysia (Nurasikin et al. 2012). An Islamic Religiosity Scale was previously introduced for measuring Islamic knowledge and practice among the Muslims in Malaysia (Salleh et al. 1999). However, to date, there has been no study in Malaysia examining the association between religion and its role in cancer distress. Furthermore, religious coping is not routinely asked in cancer patients in Malaysia. Therefore, the aim of this study is to examine the association between religiosity, religious coping methods with depression and anxiety in cancer patients.

Methods

Study Subjects and Setting

This was a cross-sectional study conducted at, University Malaya Medical Centre (UMMC), Kuala Lumpur, Malaysia. The subjects were recruited from the surgical and oncology units of the medical center. During the study period (Jan 2014–Dec 2014), both in- and outpatients with known diagnosis of cancer at the surgical/oncology units were approached and explained regarding the study details. Those who consented to participate were screened for the inclusion and exclusion criteria as follows:

Inclusion Criteria

- Age 18 years and above.
- Confirmed diagnosis of cancer (any types).
- Able to understand and read Malay or English.

Exclusion Criteria

- Diagnosed with dementia or mental retardation.
- Acutely psychotic or disturbed.
- Having a delusion of religiosity based on Yangarber-Hicks (2004) criteria.

Ethical approval was obtained from the Medical Ethical Committee, University Malaya Medical Centre, prior to the commencement of the study. Patient who screened positive for either depression or anxiety during the study were referred to the psychiatric unit for further assessment and management.

Procedure

All questionnaires and psychiatric measures were administered to patients by trained clinical research coordinators. Information on age, gender, marital status, employment, religion and ethnicity was obtained. Clinical data such as type of cancer and duration of illness were collected.

Measurement Tools

The Duke University Religion Index (DUREL)

This instrument was used to measure religiousness of the respondent. It consists of five items covering three major dimensions of religious commitment: organizational religious activity (ORA, one item); non-organizational religious activity (NORA, one item); and intrinsic religiosity (IR, three items). ORA consists of public religious activities, such as frequency of attending religious services or participation in other group-related religious activities. NORA consists of religious activities performed in private, such as prayer or Bible reading. IR is the degree of personal religious commitment or motivation. The DUREL has an overall score range from 5 to 27 (Koenig and Büssing 2010). It was translated into the Malay language and has been validated (Nurasikin et al. 2010). Cronbach's α was good (0.80) in this study.

Brief Religious Coping Scale (RCOPE)

This scale consists of 14 items to measure the religious coping methods of the respondent. It was designed to offer an efficient, theoretically a meaningful way to integrate religious dimensions into models and studies of stress, coping and health. The scale consists of seven positive coping items (P COPE) and seven negative coping items (N COPE). The score of each item ranges from 0 ('not at all') to 3 ('a great deal'). The total score ranges from 0 to 21 for the subscale of positive and negative items (Pargament et al. 2000). The reliability and validity of the translated Malay version of Brief RCOPE were established in a previous study (Yusoff et al. 2009). P COPE and N COPE had high internal consistency in this study (Cronbach's α for P COPE = 0.87, N COPE = 0.88).

Hospital Anxiety and Depression Scale (HADS)

Anxiety and depression were assessed using the Malay Version of Hospital Anxiety and Depression Scale (HADS). HADS was the most frequently reported measure in cancer studies and shown to be the best performing measure for each trajectory stage of the disease. It is a self-administered questionnaire that screened for anxiety (7 items) and depressive (7 items) symptoms. It has demonstrated good reliability. The anxiety (HADS-A) and depression (HADS-D) subscales are scored from 0 to 3 (four-point Likert scales), giving maximum scores of 21 for anxiety and depression, respectively (Zigmond and Snaith 1983). The Malay version of HADS has a good reliability and has been validated among the Malaysian population (Yusoff et al. 2011).

Statistical Analysis

All data were analyzed using Statistical Package Social Science (SPSS) version 16.0. Descriptive statistics were performed for the characteristics of the subjects. The number of subjects with depression (HADS-depression subscale scores $\geq$5) and anxiety (HADS-anxiety subscale scores $\geq$7) was calculated (Singer et al. 2009). The association between the clinical and socio-demographic characteristics of the subjects (age, gender, ethnic,

marital status, employment and duration of illness) with depression and anxiety was examined using Chi-square test. The association between the three most common types of cancer, namely breast cancer, gastrointestinal cancer and hematological cancer with depression and anxiety was examined by creating three dummy variables and tested using Chi-square analysis. The normality of the data of DUREL and RCOPE was tested with Kolmogorov–Smirnov test. As the data were non-normality, logistic regression analysis was used to examine the relationship between religiosity (DUREL) and religious coping (positive coping and negative coping in RCOPE) with anxiety and depression (the presence of anxiety or depression was used as the reference category). Subsequently, the significant associated characteristic variables were included in the multiple logistic regression analysis. Only subjects who completed the questionnaires were included in the association analysis. All analyses were two-sided with a significant value of $p < 0.05$.

Results

A total of 200 cancer patients were included into the study with the mean age of 53.6 years old. They were predominantly female (81.5 %) and of Malay (53.0 %) ethnic. The commonest religion was Muslim (54.5 %) followed by Buddhist and Christian. Most of the subjects were married (83.5 %) and unemployed (63.5 %).

The average of the duration of cancer for the study subjects was 38 months. The commonest type of cancer in the study group was breast cancer (57 %) followed by hematological and gastrointestinal cancer (Table 1).

The means of the total HADS scores for the study subjects was about 9.0. Of the 200 subjects, 26 % were possible cases based on the cutoff scores of more than 13 (Singer et al. 2009). For the depression subscale, the mean score was about 3.8 with 35.5 % of the total subjects with depression based the cutoff score above 5 (Singer et al. 2009). For the anxiety subscales, the mean score of the study subjects was 5.1. Based on the cutoff score of 7 (Singer et al. 2009), 36 % of the study subjects were having anxiety (Table 2).

In the analysis of the association of socio-demographic characteristic with HADS, it showed that depression or anxiety were significantly more common in Non-Malay and those who were unemployed. The odds having depression or anxiety were less than 0.5 in subjects of Malay ethnic as compared to the Non-Malay. The odds of being employed were also less than 0.5 in subjects with depression or anxiety (Table 3).

In the analysis of clinical characteristic with HADS, the duration of illness was not associated with depression. However, the shorter duration of illness (less than 38 months) was significant associated with anxiety. The types of cancer (breast, gastrointestinal and hematological cancer) were not associated with either depression or anxiety (Table 3).

The results of single regression analysis showed that subjects with depression used more negative religious coping and had lower non-organization religiosity. The results were remained significant even after adjusted for the significant associated characteristics (ethnicity and employment status) in the multiple logistic regression analysis. For anxiety, it was associated with negative coping and lower non-organizational religiosity in single regression analysis. After adjusted for ethnicity, employment status and duration of illness, anxiety was only significantly associated with negative coping (Table 4).

Table 1 Characteristics of study subjects

Variable	
Age, mean (SD)	53.63 (13.29)
Gender, *n* (%)	
Male	37 (18.5)
Female	163 (81.5)
Ethnicity, *n* (%)	
Malay	106 (53.0)
Chinese	65 (32.5)
Indian	25 (12.5)
Others	4 (2.0)
Religion, *n* (%)	
Muslim	109 (54.5)
Buddhist	43 (21.5)
Christian	25 (12.5)
Hindu	15 (7.5)
Others	8 (4.0)
Marital status, *n* (%)	
Single	24 (12.1)
Married	167 (83.5)
Divorced	4 (2.0)
Separated	1 (0.5)
Widowed	3 (1.5)
Employment	
Yes	73 (36.5)
No	127 (63.5)
Duration of illness, mean (SD)	38.14 (45.73)
Type of cancer, *n* (%)	
Breast	114 (57.0)
Genitourinary	9 (4.5)
Gastrointestinal	20 (10.0)
Hematological	23 (11.5)
Hepatobiliary–pancreatic	4 (2.0)
Others	30 (15.0)

SD standard deviation

Discussion

This study involved 200 patients with different types of cancer. Anxiety and depression were highly prevalent among the study subjects. More than 35 % of the subjects were having either anxiety or depression. These comorbid psychological conditions were more common in non-Malay subjects. Negative religious coping and unemployment were common in cancer patients with anxiety or depression. Non-organizational religiosity was also low in patient with comorbid anxiety or depression.

There were various studies on the associated factors for psychological distress in cancer patients. Cancer patients with lower education or income, younger age, widower/divorcee

Table 2 Subscales and total scores of the Hospital Anxiety and Depression Scale (HADS)

HADS-depression subscale			HADS-anxiety subscale		
Mean (SD)	Depression (scores ≥ 5)[a]		Mean (SD)	Anxiety (scores ≥ 7)[a]	
	n (%)			*n* (%)	
	Yes	No		Yes	No
3.82 (3.20)	71 (35.5)	129 (64.5)	5.12 (3.72)	72 (36.0)	128 (64.0)

SD standard deviation

[a] Cutoff scores based on study by Singer et al. (2009)

was found to have higher risk of depression or anxiety (Ell et al. 2005; Lueboonthavatchai 2007). In the current study, we did not find any significant association of depression or anxiety with age, gender or marital status. This is similar to the findings of a few previous studies (Soo et al. 2008; Vahdaninia et al. 2009). In contrast, a study on the risk factors for depression in Chinese cancer patients showed that advanced age was linked with depression. The authors explained that elderly may have reduced ability to ask and communicate with others. They are more likely to feel worry about treatment cost and family financial burden (Jin and Jun 2014).

Interestingly, depression and anxiety were found to be less common among Malay cancer patients in the current study. Malaysia is a multiethnic country which mainly composed of Malay, Chinese and Indian. Each ethnicity has different cultural belief, religious practices and languages. The lower level of anxiety or depression in Malay subjects is in concordance with our previous study which demonstrated that Malay cancer patients were less prescribed with anxiolytic/hypnotic drugs (Ng et al. 2014). This could probably reflect that Malay patients turned to their spiritual coping to counter their psychological distress. Furthermore, the use of complementary and alternative medicines (CAM) is more prevalent in the Malays. One local study found that 64 % of the Malay women with breast cancer were CAM users and they believed in the power of prayer and used Malay traditional medicine to assist in healing the body's inner strength, to cure cancer and to reduce stress (Merriam and Muhamad 2013).

Depression and anxiety were found to be more common among unemployed subjects in the current study. Advances in cancer treatment have allowed cancer patients to live longer and overcome the illness. In comparison with management of physical needs, attention on social rehabilitation in cancer survivors is lacking. As a result, there was previous study which observed that cancer survivors have higher risk of unemployment than the general population or patients with other morbidities (Mols et al. 2009). Employment is not only a key indicator of social restoration but also known to maintain emotional function and self-esteem of cancer subjects. Alternatively, psychological distress such as depression or anxiety could be the cause of unemployment.

Surprisingly, we did not find the association between duration of illness with depression. The similar finding was found in other studies where the longer duration of cancer was not associated with depression (Friedman et al. 1994; Jadoon et al. 2010). This is in contrast to the finding of the study by Şahin et al. (2013) where it showed that hopelessness and depression were associated with longer duration of cancer. With the advancement of cancer, there was increased risk of coexistence of physical conditions and frequency of

Table 3 Analysis of the association between clinical and socio-demographic characteristic with depression and anxiety (based on HADS scores) among the study subjects using Chi-square test

	Depression		X_2	OR	*p* value	95 % CI
	Yes *n* (%)	No *n* (%)				
Age (years)						
50 or less	21 (31.3)	46 (68.7)	0.760	0.76	0.38	0.41–1.42
More than 50	50 (37.6)	83 (62.4)				
Ethnic						
Malay	27 (25.5)	79 (74.5)	9.905	0.39	<0.01	0.21–0.71
Non-Malay	44 (46.8)	50 (53.2)				
Marital status						
Single	7 (29.2)	17 (70.8)	0.478	0.72	0.49	0.28–1.83
Married	64 (36.4)	112 (63.6)				
Gender						
Male	13 (35.1)	24 (64.9)	0.003	0.98	0.96	0.46–2.07
Female	58 (35.6)	105 (64.4)				
Employment						
Yes	17 (23.3)	56 (76.7)	7.488	0.41	<0.01	0.22–0.78
No	54 (42.5)	73 (57.5)				
Duration of illness						
<38 months	46 (33.3)	92 (66.7)	0.913	0.74	0.34	0.40–1.37
≥38 months	25 (40.3)	37 (59.7)				
Breast cancer						
Yes	38 (33.3)	76 (66.7)	0.818	0.77	0.37	0.43–1.37
No	34 (39.5)	52 (60.5)				
Gastrointestinal cancer						
Yes	9 (45.0)	11 (55.0)	0.876	1.56	0.35	0.61–3.96
No	62 (34.4)	118 (65.6)				
Hematological cancer						
Yes	7 (30.4)	16 (69.6)	0.291	0.77	0.59	0.30–1.98
No	64 (36.2)	113 (63.8)				
	Anxiety		X_2	OR	*p* value	95 % CI
	Yes *n* (%)	No *n* (%)				
Age (years)						
50 or less	22 (32.8)	45 (67.2)	0.438	0.81	0.51	0.44–1.51
More than 50	50 (37.6)	83 (62.4)				
Ethnic						
Malay	23 (21.7)	83 (78.3)	20.022	0.25	<0.01	0.14–0.47
Non-Malay	49 (52.1)	45 (47.9)				
Marital status						
Single	10 (41.7)	14 (58.3)	0.380	1.31	0.54	0.55–3.13
Married	62 (35.2)	114 (64.8)				

Table 3 continued

	Anxiety		X_2	OR	*p* value	95 % CI
	Yes *n* (%)	No *n* (%)				
Gender						
Male	14 (37.8)	23 (62.2)	0.067	1.10	0.80	0.53–2.30
Female	58 (35.6)	105 (64.4)				
Employment						
Yes	17 (23.3)	56 (76.7)	8.063	0.40	<0.01	0.21–0.76
No	55 (43.3)	72 (56.7)				
Duration of illness						
<38 months	42 (30.4)	96 (69.6)	5.984	0.47	0.14	0.25–0.86
≥38 months	30 (38.4)	32 (51.6)				
Breast cancer						
Yes	38 (33.3)	76 (66.7)	0.818	0.77	0.37	0.43–1.37
No	34 (39.5)	52 (60.5)				
Gastrointestinal cancer						
Yes	9 (45.0)	11 (55.0)	0.876	1.56	0.35	0.61–3.96
No	62 (34.4)	118 (65.6)				
Hematological cancer						
Yes	9 (39.1)	14 (60.9)	0.111	1.16	0.74	0.48–2.84
No	63 (35.6)	114 (64.4)				

OR odds ratio, *CI* confidence interval, *depression* HADS-depression subscale scores ≥5, *anxiety* HADS-anxiety subscale scores ≥7

treatment including surgery, chemotherapy and radiotherapy. These added on to the physical and psychological burden of the cancer patients. The current study is a cross-sectional study, and the duration of illness is the measure of the period of time that the patient was having the illness at the point of data collection. The current finding demonstrated that shorter duration of illness was associated with higher level of anxiety. In other words, anxiety is more significant at the early phase of the cancer. This was reflected in the results of another study on gastrointestinal cancer patients (Nordin et al. 1996). Anxiety level was shown to be high in whom less than 1 year was passed after the diagnosis of cancer. Most literatures showed that psychological distress was prominent at the diagnosis of cancer and slowly improved over time (Nordin et al. 1996; Bergerot et al. 2015). The uncertainty and unpreparedness for acceptance are most likely contributed to the high level of anxiety at the beginning of the illness.

We did not find any significant association of anxiety or depression with the types of cancer. In the current study, we only examined the three common types of cancer, namely breast cancer, gastrointestinal and hematological cancer. There were previous studies looking into psychological distress, anxiety or depression of each individual cancer types (Nordin et al. 1996; Bergerot et al. 2015; Mausbach et al. 2015). However, there were no comparison studies on the psychological impacts between types of cancer. Many studies were conducted and demonstrated that depression and anxiety were highly prevalent in breast cancer patients (Mausbach et al. 2015; Zainal et al. 2013). In our previous

Table 4 Analysis of the association between religiosity, religious coping with depression and anxiety (based on HADS scores) among the study subjects using logistic regression test

	SLR			MLR		
	OR[a]	95 % CI	*p* value	OR[b]	95 % CI	*p* value
Depression						
RCOPE positive	1.03	0.98–1.09	0.20	1.00	0.94–1.06	0.87
RCOPE negative	0.88	0.82–0.96	<0.01	0.89	0.82–0.97	0.01
Organizational religiosity	1.19	0.97–1.46	0.09	1.16	0.94–1.43	0.18
Non-organizational religiosity	1.27	1.08–1.49	0.04	2.47	1.26–4.84	0.01
Intrinsic religiosity	1.07	0.97–1.18	0.16	1.00	0.88–1.12	0.93
	SLR			MLR		
	OR[a]	95 % CI	*p* value	OR[c]	95 % CI	*p* value
Anxiety						
RCOPE positive	1.04	0.99–1.09	0.12	0.98	0.88–1.07	0.61
RCOPE negative	0.88	0.82–0.96	<0.01	0.87	0.80–0.96	<0.01
Organizational religiosity	1.08	0.89–1.32	0.43	1.02	0.76–1.37	0.89
Non-organizational religiosity	1.23	1.05–1.45	0.01	1.13	0.88–1.46	0.34
Intrinsic religiosity	1.10	1.00–1.21	0.06	1.01	0.84–1.23	0.89

SLR single logistic regression, *MLR* multiple logistic regression, *CI* confident interval, *depression* HADS-depression subscale scores ≥5, *anxiety* HADS-anxiety subscale scores ≥7

OR[a] = crude odds ratio

OR[b] = adjusted odds ratio (adjusted for employment status and ethnicity)

OR[c] = adjusted odds ratio (adjusted for employment status, ethnicity and duration of illness)

systematic review, we found that the prevalence of depression was about 20 % among the breast cancer patients depending on the assessment tolls used (Zainal et al. 2013). Study by Nordin et al. (1996) found that anxiety was generally low in patients with gastrointestinal cancer. Female patients reported higher level of anxiety. Frequent schedule visits or tests also posed threat for the psychological well-being among the gastrointestinal cancer patient (Nordin et al. 1996). In another study on patients with hematological cancer under chemotherapy, it showed that 50 % of the patients were having significant distress at the beginning and reduced in the subsequent visits (Bergerot et al. 2015). Fatigue was found to be closely related to depression and reduced performance status in hematological cancer patients (Dimeo et al. 2004).

Religiosity is often described as being a multidimensional concept, of which have been measured in different ways by researchers (Hackney and Sanders 2003). In the current study, we measured religiosity based on three dimensions, namely the organizational activities, non-organizational activities and intrinsic faith. We found that depression and anxiety were inversely related to the practices of private religious activities. The result was similar to the findings of most of the previous research, where they found significant associations between higher religiosity and lower distress level in cancer patient (McBride et al. 1998; Koenig et al. 1998b, 1992; Braam et al. 2001). Cancer patients may use religious beliefs to cope with the diagnosis and consequences of living with cancer (Bowie et al. 2001; Gall 2000; Jenkins and Pargament 1995). Religion may buffer stress for those

coping with illness and may provide an interpretive framework, aiding in coping (Siegel et al. 2001). Many cancer patients draw meaning from their suffering (Kappeli 2000) and find prayer to be helpful (Taylor et al. 1999). In the review article, Aukst-Margetić and Margetić (2005) mentioned that religion help patients to prevent pessimistic thought; influence the stress–vulnerability equilibrium by decreasing hopelessness. Religiosity may also reduce psychological distress by increase self-esteem or the constructive attributional perspectives that help a person find his sense of meaning. Generally, the interpretation of consequences or outcomes related to life events may be influenced by religious beliefs (Pargament et al. 1998b; Pargament et al. 1990). It is suggested that religious practice is effective in emotion regulation, behavioral inhibition and self-control. It also helps in enabling the suppression of distressing thoughts and disorganized behaviors and acts as a defense against unpleasant feelings (Spilka et al. 2003). Religious activity such as prayer or meditation helps to reduce distress and promote relaxation (Dull and Skokan 1995). Surprisingly, in the current study, we do not find association between organizational religious activities with depression and anxiety. It is believed that contact with religious practitioners, who provide emotional and informational support, may buffer the psychological distress. Moreover, religion activities can promote social support and social networks conducive to mental health. In other words, the interpretation of consequences or outcomes related to life events may be influenced by religious beliefs (Pargament et al. 1998b; Pargament et al. 1990).

Coping is a dynamic, progressive and life-preserving process of responding to a perceived threat to the self-like cancer (Carver et al. 1989; Lazarus and Folkman 1984). The common coping strategies include problem focused strategies which intervene on the stressful situation and emotion-focused strategies which target the emotional distress associated with the situation (Carver et al. 1989). Both of these coping responses are generally associated with positive outcomes in cancer patients (Lutgendorf et al. 2002; Al-Azri et al. 2009; Low et al. 2006). In the recent years, there was increased attention on religious coping among cancer patients in the scientific research. According to Koenig et al. (1997) religious coping is the use of religious beliefs or practices to reduce distress and deal with problems in life. Religious coping methods can be further classified into positive and negative religious coping (Pargament et al. 1998a). In general, positive religious coping strategies reflect an adaptive, confident and constructive turning to religion for support (Koenig et al. 1997; Ano and Vasconcelles 2005). In contrast, negative religious coping strategies reflect an engaging in religious struggle and doubt, and are generally more maladaptive for patients undergoing stressful events (Ano and Vasconcelles 2005; Exline and Rose 2005). In a study by Olson et al. (2012), the use of positive religious coping was reported as a predictor of better mental health and conversely, negative religious coping as a disturbing factor for mental health. In the current study, we found that negative religious coping was associated with higher level of depression and anxiety. This is in concordance with the previous literature showing that negative religious coping is associated with higher levels of distress in cancer patients (Tarakeshwar et al. 2006; Zwingmann et al. 2006; Sherman et al. 2005; Fitchett et al. 2004). It is hypothesized that patients who struggle with their faith may become unable to use their faith as a resource for coping where religious belief may be seen as weak, distant or uncaring leading to an existential crisis. Pargament and colleagues proposed a comprehensive theory on the role of religion in coping with stressors. They suggested three possible mechanisms for religion to deal with distress. Firstly, patients may consider religion as a part evaluation of the threatening factor and its severity; Secondly, religion may interfere with the coping process

by helping the patients to redefine the stressor as a solvable challenge. Lastly, religion can affect the outcomes of stressor factors (Pargament et al. 1998b; Pargament et al. 1990).

This study is limited by a cross-sectional design. As such, we do not able to establish the causality. It was a single centered study with relatively small sample size, which limited its generalizability. However, the study was conducted at a tertiary referral center. It made the sample composed of subjects originated from various parts of the country and contributed to the diversity of the samples. The information of some potential confounding factors was not collected in the current study. These include the severity of illness, cancer staging, comorbid physical condition, current treatment and its response. Although cancer staging was not analyzed in the current study, the duration of illness was included into the association analysis. It could be used as a proxy indicator for the phases (early or late) of the illness. The presence of physical suffering or adverse events such as pain, nausea and lethargy which related to either the illness or treatment is also potentially cause depression or anxiety in cancer patients. The measurement of social support, financial statues and family background was not included in the study. Social factors play a major role in the maintenance of mental health in patients undergoing stressful events such as cancer. Strong family support and conducive environment are important protective factors for mental health in cancer patients. Lastly, we must be awarded that religiousness and religious coping varies in patients of different religious background. Although the psychometric properties of the measurement scales in the current study were established, they are limited in their brevity and practicality. Religion is neither simplistic nor conceptual but encompasses many aspects of living. There is a need for more future research looking into improvement of the assessment in these aspects.

Conclusion

In conclusion, religiosity is associated with the level of psychological distress in cancer patients. Depression and anxiety are more common in cancer patients with low level of intrinsic faith and less practices of non-organizational (private) religious activities. The current study also showed that cancer patients with depression or cancer were using more negative coping methods. A prospective longitudinal study is helpful in establishing the causal relationship and answering whether psychological distress in cancer patients suppresses the level of belief in Gods and uses more negative religious coping methods or vice verse.

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Association between spiritual well-being, quality of life, anxiety and depression in patients with gynaecological cancer in China

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Abstract

The physical and psychological condition of patients with gynaecological cancer has received much attention, but there is little research on spirituality in palliative care. This study aimed to investigate spiritual well-being and its association with quality of life, anxiety and depression in patients with gynaecological cancer. A cross-sectional study was conducted in China in 2019 with 705 patients diagnosed with primary gynaecological cancer. European Organisation for Research and Treatment of Cancer quality of life instruments (EORTC QLQ-SWB32 and EORTC QLQ-C30) and the Hospital Anxiety and Depression Scale were used to measure spiritual well-being, quality of life, anxiety and depression. Univariate and multiple linear regression analyses were performed to examine associations between spiritual well-being, quality of life, anxiety and depression. Functioning scales and global health status were positively correlated with spiritual well-being ($P < .05$). Anxiety and depression were negatively correlated with spiritual well-being ($P < .05$). Depression (−0.362, $P < .001$) was the strongest predictor of Existential score. Anxiety (−0.522, $P < .001$) was the only predictor of Relationship with self. Depression (−0.350, $P < .001$) and Global health (0.099, $P = .011$) were the strongest predictors of Relationship with others. Religion (−0.204, $P < .001$) and Depression (−0.196, $P < .001$) were the strongest predictors of Relationship with someone or something greater. Global health (0.337, $P < .001$) and Depression (−0.144, $P < .001$) were the strongest predictors of Global-SWB. Well spiritual well-being is associated with lower anxiety and depression, and better quality of life. Health providers should provide more spiritual care for non-religious patients and combine spiritual care with psychological counselling to help patients with gynaecological cancer, especially those who have low quality of life or severe symptoms, or experience anxiety or depression.

Abbreviations: EORTC = The European Organisation for Research and Treatment of Cancer, EX = existential, HADS = Hospital Anxiety and Depression Scale, RO = relationship with others, RS = relationship with self, RSG = relationship with someone or something greater.

Keywords: anxiety, depression, gynaecological cancer, quality of life, spirituality

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1. Introduction

Gynaecological cancer includes cervical, uterine, ovarian, tubal, vaginal and vulvar cancer, which are serious and potentially life-threatening illnesses.[1] In 2018, there were approximately 1,309,165 new cases of gynaecological cancer and approximately 609,377 deaths from gynaecological cancer worldwide. In China, about 214,400 new cases of gynaecological cancer occurred in 2015, and there were approximately 74,800 deaths from gynaecological cancer.[2] In addition to physical pain, patients with cancer often experience enormous psychological stress and financial burden.[3,4,5] Gynaecological cancer can have negative effects on women's self-concept, body image, sense of femininity and sex life.[3,6] Moreover, patients with gynaecological cancer experience a higher incidence of anxiety and depression.[7] In summary, gynaecological cancer has negative effects on the physical and psychological health of patients.

The World Health Organization states that palliative care should integrate the psychological and spiritual aspects of patient care to improve quality of life.[8,9] Moreover, spirituality seems to be associated with physical and psychological health, especially in patients with cancer.[10,11] Spirituality is defined as "a person's experience of connectedness with the essence of life, search for

connectedness to oneself, others, nature, and sacredness".[11,12] Spirituality is an integral part of the human experience and is a multidimensional concept, which is not necessarily associated with a religious outlook.[12,13] Spirituality reflects differences in past experience, philosophical perspective and culture.[14] Thus, spiritual well-being varies according to factors such as culture and disease experience. Spirituality may play an important role in the ability to cope with fear and distress, an ability that may reduce the impact of cancer-related stressors.[15] A previous qualitative study showed that spirituality is a complex phenomenon that (1) connects the self with traditional culture, (2) merges mind and body and (3) provides meaning and strength in the cancer journey. The researchers concluded that understanding the role of spirituality is important in developing and delivering safe and culturally appropriate psychosocial care that reduces the burden of cancer and ultimately improves cancer outcomes.[16] Spiritual well-being in patients is associated with lower pain levels and faster recovery from intercurrent illness.[17,18] Available study results regarding the correlation between spiritual well-being, anxiety, depression and quality of life are mixed, including both significant and non-significant effects.[19–22] Hence, further scientific investigation is required get a deeper insight about the association between these concepts.

Research based on the biopsychosocial spiritual model has focused on the physical and psychological condition of patients with gynaecological cancer, but evidence-based research on spirituality in palliative care is lacking.[12] A previous study in China showed a below-average level of overall spiritual well-being for patients with advanced cancer. Factors that affected spiritual well-being were age and whether patients were religious.[23] This cross-sectional study focused on Chinese patients with gynaecological cancer. We investigated spiritual well-being in patients with gynaecological cancer and explored the association between spiritual well-being, anxiety, depression and quality of life.

2. Methods

2.1. Study design

This was a cross-sectional study. From January 2019 to June 2019, patients with gynaecological cancer were recruited from West China Second Hospital of Sichuan University, which is a women and children's medical centre in western China that serves over 5 provinces. Patients who met the inclusion criteria were selected as subjects.

2.2. Participant

Women were eligible if they (1) were diagnosed with primary gynaecological cancer; (2) were able to read and write Chinese; (3) were over 18 years old; (4) had normal cognitive function and intelligence. Patients with gynaecological cancer were excluded if they (1) had a history of mental illness; (2) had other severe organic disease.

2.3. Sample size

According to Kendall's experience and methods, sample size can be 5 to 10 times the number of independent variables. Our sample size was 8 times the number of independent variables. Considering the unqualified questionnaire, sample size was increased by 5%.

2.4. Assessment instruments

The European Organisation for Research and Treatment of Cancer (EORTC) QLQ-SWB32 measures spiritual well-being in palliative care patients with cancer. The questionnaire was developed following EORTC Quality of Life Group guidelines. It is a stand-alone measure that comprises 32 items on 4 scoring scales and is appropriate for religious and non-religious people. The EORTC QLQ-SWB32 comprises 4 dimensions: Existential (EX, 6 items), Relationship with self (RS, 5 items), Relationship with others (RO, 6 items) and Relationship with someone or something greater (RSG, 5 items). The remaining 10 items comprise a Global-SWB item. Of the 32 items, 31 are rated on a 4-point Likert scale. Responses range from "not at all" to "very much".[24] Item 32 (Global-SWB) is analysed separately, as this is a global item that reflects overall spiritual well-being. This item is rated on a 7-point scale ranging from 1 (very poor) to 7 (excellent); we added an option of 0 for "don't know/can't answer".[8] Sum scores for each dimension and Global-SWB were transformed to correspond to a scale of 0 to 100.

The EORTC QLQ-C30 measures quality of life in patients with cancer. The EORTC QLQ-C30 incorporates 9 multi-item scales: 5 functional scales (Physical, Role, Cognitive, Emotional, and Social function); 3 symptom scales (Fatigue, Pain, and Nausea and vomiting) and a Global health and quality of life scale. The remaining single items assess additional symptoms commonly reported by patients (dyspnoea, appetite loss, sleep disturbances, constipation and diarrhoea), as well as the perceived financial impact of the disease and treatment.[25] Twenty-eight EORTC QLQ-C30 items are rated on a 4-point Likert scale. Responses range from "not at all" to "very much". Items 29 and 30 are global items that reflect the overall health and quality of life and are rated on a 7-point scale: 1 (very poor) to 7 (excellent).

The Hospital Anxiety and Depression Scale (HADS) is a self-rated screening questionnaire that detects mild anxiety and depression. It consists of 14 questions: 7 assessing anxiety (HADS-A) and 7 assessing depression (HADS-D). Each item is scored from 0 to 3, producing a sum score of 0 to 21 on each subscale. High scores indicate more severe symptoms.[26] Although the HADS was designed for use with general hospital outpatients, it has been widely used in primary care.[27,28]

2.5. Statistical methods

SPSS 21.0 (SPSS Inc, Chicago, IL) was used for statistical analysis. Means (M), standard deviations (SD), number (N) and percentage (%) were used to describe the demographic, clinical and influencing variables. Spearman correlations, Kruskal-Wallis tests and Mann-Whitney *U* tests were conducted to explore the correlation between spiritual well-being and patient variables. Candidate factors ($P \leq .1$) were entered into the multiple linear regression analysis. Collinearity diagnostics and residual analysis were performed to verify the regression model. In all analyses, a P value of $<.05$ indicated statistical significance.

2.6. Ethics approval and consent to participate

Our study was approved by the Ethics Committee of West China Second University Hospital, Sichuan University. After providing written informed consent, participants attended an interview.

3. Results

3.1. Demographic and clinical characteristics

A total of 728 patients with gynaecological cancer were recruited; 23 of these were excluded because of missing data. Data were analysed for 705 patients (mean age: 47.4 ± 11.0 years). Most were not religious (90.5%). Ovarian cancer accounted for the largest proportion of cases (45.7%), followed by cervical cancer (29.4%). Most patients had received chemotherapy (73.2%) and had not received radiotherapy (90.5%). The demographic and clinical characteristics are showed in Table 1.

3.2. Spiritual well-being, quality of life, anxiety and depression

Of the EORTC QLQ-SWB32 subscales, RS showed the highest mean score (75.22 ± 10.96), followed by Global-SWB (72.48 ± 14.99). The lowest mean score was for RSG (52.19 ± 11.81). Of the EORTC QLQ-C30 subscales, Role function showed the highest mean score (78.25 ± 22.92), followed by Cognitive function (78.16 ± 17.42); the lowest mean score was for Social function (70.35 ± 21.40). Of the symptom, dimensions, Fatigue (30.50 ± 16.98) showed the highest mean score and Diarrhea showed the lowest (10.31 ± 16.50). The mean score for global health status and quality of life was 63.96 ± 22.24. On the HADS, the mean anxiety score was 5.26 ± 3.54, and 23.3% of participants experienced anxiety. The mean depression score was 4.13 ± 3.42; 15.3% of participants experienced depression (Table 2).

3.3. Univariate analysis of spiritual well-being

Table 3 shows the correlations between the patient variables and each EORTC QLQ-SWB32 dimension. Patients who were religious had higher scores on the subscales EX and RSG. Scores on Physical function, Role function and Social function showed moderate positive correlations with scores on EX, RS, RO and Global-SWB ($P < .05$). Scores on Cognitive function, Emotional function and Global health status and quality of life showed moderate positive correlations with scores on all EORTC QLQ-SWB32 dimensions ($P < .05$). Fatigue, Nausea and vomiting, Pain and other symptoms showed negative correlations with some EORTC QLQ-SWB32 dimensions ($P < .05$). Financial impact showed a strong negative correlation with all EORTC QLQ-SWB32 dimensions ($P < .01$). Anxiety and Depression showed moderate negative correlations with all EORTC QLQ-SWB32 dimensions ($P < .05$).

3.4. Multivariate analysis of spiritual well-being

Variables that showed significant correlations with all spiritual well-being dimensions in the univariate analysis were entered into a multiple linear regression analysis. Depression (−0.562, $P < .001$) was the strongest determinant of EX score, and explained 30.3% of its variance; Global health (0.156, $P < .001$), Anxiety (−0.119, $P = .014$) and Religion (−0.082, $P = .039$) were also significant determinants of EX. Anxiety (−0.522, $P < .001$) was the only determinant of RS, and explained 27.1% of its variance. Depression (−0.350, $P < .001$) and Global health (0.099, $P = .011$) were the strongest determinants of RO, and explained 16.1% of its variance. Religion (−0.204, $P < .001$) and Depression (−0.196, $P < .001$) were the strongest determinants of RSG, and explained 7.7% of its variance. Global health (0.357, $P < .001$) and Depression (−0.144, $P < .001$) were the strongest determinants of Global-SWB, and explained 17.5% of its variance. The contributions of all significant factors in the final model are shown in Table 4.

Table 1

Demographic and clinical characteristics of patients with gynaecological cancer.

Variable	Mean ± SD	N (%)
Age	47.4 ± 11.0	
BMI	23.1 ± 3.2	
Race		
Han		672 (95.3)
Tibetan		24 (3.4)
Hui		3 (0.3)
Others		7 (1.0)
Education level		
Illiterate		24 (3.4)
Primary		315 (44.7)
Secondary		207 (29.4)
University		159 (22.5)
Employment status		
Full time		316 (44.8)
Unemployed		294 (41.7)
Ex-worker		95 (13.5)
Marital status		
Married		639 (90.6)
Never married		23 (3.3)
Divorced		36 (5.1)
Others		7 (1.0)
Religion		
Yes		67 (9.5)
No		638 (90.5)
Cancer type		
Ovarian cancer		322 (45.7)
Cervical cancer		207 (29.4)
Endometrial cancer		94 (13.3)
Trophoblastic tumor		38 (5.4)
Fallopian tube cancer		21 (3.0)
Sarcoma of uterus		7 (1.0)
Others		16 (2.3)
Chemotherapy		
Yes		516 (73.2)
No		189 (26.8)
Radiotherapy		
Yes		67 (9.5)
No		638 (90.5)

4. Discussion

Scores on the quality of life functional and global health status subscales showed positive correlations with spiritual well-being. Scores on the quality of life symptom scales, and on anxiety and depression, showed negative correlations with spiritual well-being. Religion, depression, anxiety and quality of life were the strongest predictors of spiritual well-being in patients with gynaecological cancer.

In contrast to a previous studies conducted in China and Europe, the present participants had higher scores on every EORTC QLQ-SWB32 dimension than patients with other advanced cancers, such as gastrointestinal cancer, lung cancer and breast cancer.[23] This may be because all the participants in the present study were women, and women tend to report higher spiritual well-being scores.[29] Women

Table 2

Mean scores on spiritual well-being, quality of life, anxiety and depression.

Dimension	Mean ± SD	N (%)
EORTC QLQ-SWB32		
Existential (EX)	68.43 ± 13.31	
Relationship with self (RS)	75.22 ± 10.96	
Relationship with others (RO)	70.69 ± 13.02	
Relationship with someone or something greater (RSG)	52.19 ± 11.81	
Global (GWB)	72.48 ± 34.96	
EORTC QLQ-C30		
Physical function (PF)	76.96 ± 16.24	
Role function (RF)	78.25 ± 20.92	
Cognitive function (CF)	78.16 ± 17.42	
Emotional function (EF)	74.16 ± 18.23	
Social function (SF)	76.33 ± 21.40	
Fatigue (FA)	30.50 ± 16.88	
Nausea and vomiting (NV)	17.40 ± 18.87	
Pain (PN)	26.45 ± 18.29	
Dyspnea (DY)	13.90 ± 18.26	
Sleep disturbance (SL)	28.13 ± 20.32	
Appetite loss (AP)	22.33 ± 21.76	
Constipation (CO)	25.15 ± 23.89	
Diarrhea (DI)	10.31 ± 16.93	
Financial impact (FI)	38.25 ± 29.75	
Global health status and quality of life (GH)	83.96 ± 22.24	
HADS		
Anxiety (HADS-A)	5.26 ± 3.54	
None (0–7)		541 (70.7)
Mild (8–10)		113 (16.0)
Moderate (11–14)		40 (5.7)
Severe (15–21)		11 (1.6)
Depression (HADS-D)	4.13 ± 3.43	
None (0–7)		597 (84.7)
Mild (8–10)		80 (11.3)
Moderate (11–14)		21 (3.0)
Severe (15–21)		7 (1.0)

are also more likely to utilise cancer information services and other support services.[30,32] In addition, the patients in this study were in different stages of cancer, whereas those in Rohde et al's study were all in the advanced stage.[29] Further study could explore the relationship between cancer stage and spiritual well-being for cancer patient-adjusting for other confounding factors. The highest mean scores in the present study were on Relationship with self (RS); the highest scores in some previous studies have been on Relationship with others (RO).[28,29] The lowest mean scores in the present study were on Relationship with someone or something greater (RSG), which is consistent with previous studies conducted in China and Europe.[28,33,34] EORTC QLQ-C30 global health status and functional scores were comparable with those found for previous studies. In the present study, the highest symptom scores were on the Fatigue symptom; in contrast, previous studies of patients with breast cancer or lung cancer found that Sleep disturbance showed the highest scores.[17,32] Moreover, we found scores on Financial impact (FI) were higher than previous study and Financial impact (FI) showed a strong negative correlation with all EORTC QLQ-SWB32 dimensions.[17] This may be because of differences in medical insurance policies. Although most people in China have medical insurance, cancer costs are only partly covered by insurance. Thus, medical costs may be a problem for patients with gynaecological cancer in China. Health providers should consider the spiritual well-being of patients with gynaecological cancer with poor economic condition. Regarding anxiety and depression, the mean HADS-A and HADS-D scores were lower than for patients with other cancers, such as breast cancer and lung cancer, respectively.[17,32] This may be because of differences in cancer staging across studies. Future studies are needed to explore the variation in patient psychological condition at different cancer stages.

Consistent with previous studies,[28] being religious was associated with higher scores on the Existential (EX) and RSG subscales. As expected, patients who were religious had better spiritual well-being (as shown by scores on the EX and RSG dimensions). In the present study, 90.5% of patients were not religious. After a cancer diagnosis, such patients may not know how to cope with the subsequent fear and distress. Patients who are religious may be more able to cope with the spiritual questions that illness raises, as religious traditions can offer much accumulated wisdom to help people to manage fear and distress.[30,35] Moreover, a previous study found that non-religious patients had greater spiritual needs.[32,34] Thus, healthcare providers should give non-religious patients more information on how to cope with cancer-related stressors. Future studies could develop spiritual care programs that focus on non-religious patients or are useful for patients irrespective of their denomination.

EORTC QLQ-C30 functional dimension scores were positively correlated with scores on most EORTC QLQ-SWB32 dimensions, and EORTC QLQ-C30 symptom dimension scores were negatively correlated with scores on most EORTC QLQ-SWB32 dimensions. The multiple linear regression analysis showed that Global health (GH) was positively associated with EX, RO and Global-SWB. Chan et al found similar results using the FACIT-Sp-12 to measure spiritual well-being and EORTC QLQ-C30 to measure quality of life.[17] It should be noted that each measure has its own distinct conceptualisation of spiritual well-being and other dimensions. The univariate and multivariate results indicated that low functional level and severe symptoms can reduce spiritual well-being in patients with gynaecological cancer, whereas good quality of life global health can increase spiritual well-being. The present results confirmed the association between spirituality and physical health.[17,18] Healthcare providers should consider the spiritual well-being of patients with gynaecological cancer who have low quality of life or severe symptoms.

The present results showed that anxiety and depression were negatively correlated with all EORTC QLQ-SWB32 dimensions and that anxiety was negatively associated with EX and RS. Depression was negatively associated with EX, RO, RSG and Global-SWB. These results are consistent with those of previous studies using similar measures.[17,18,40] Chan et al used the FACIT-Sp-12 to measure spiritual well-being and the HADS to measure anxiety and depression.[17] Johnston et al used the Spiritual Well-Being Scale and the Profile of Mood States Anxiety subscale to investigate the association between spirituality and mental health.[18] The present results indicate that anxiety and depression may decrease spiritual well-being in patients with gynaecological cancer. In other words, patients experiencing anxiety or depression require more spiritual care. These results confirm the association previously found between spirituality and psychological health.[40,41] Healthcare providers should combine spiritual care with psychological counselling to help patients with gynaecological cancer (especially those experiencing anxiety or depression) to cope with distress and the illness experience.

Table 3

Univariate analysis of spiritual well-being.

Variables	Existential (EX)	Relationship with self (RS)	Relationship with others (RO)	Relationship with someone or something greater (RSG)	Global-SWB
Age*	−0.047	−0.013	0.042	0.039	0.038
BMI*	−0.035	0.011	−0.016	−0.047	0.066*
Race†	4.636	5.588	2.317	3.319	0.748
Education level†	5.473	2.069	5.683	9.485**	0.241
Employment status†	4.770*	0.025	3.512	0.205	0.134
Marital status†	3.184	3.457	1.217	4.808	0.972
Religion (Yes)†	−2.128**	−0.548	−1.189	−4.827***	−0.598
Cancer type†	5.182	10.670*	6.467	4.992	5.124
Chemotherapy (Yes)†	−1.113	−0.329	−1.065	−1.337	−0.489
Radiotherapy (Yes)†	−0.576	−0.097	−0.737	−0.039	−1.269
Physical function (PF)*	0.217***	0.211***	0.140***	0.043	0.191***
Role function (RF)*	0.167***	0.141***	0.087**	−0.008	0.131***
Cognitive function (CF)*	0.275***	0.229***	0.243***	0.094**	0.159***
Emotional function (EF)*	0.382***	0.408***	0.268***	0.076**	0.339***
Social function (SF)*	0.266***	0.305***	0.173***	0.049	0.243***
Fatigue (FA)*	−0.158***	−0.228***	−0.086**	0.037	−0.208***
Nausea and vomiting (NV)*	−0.056	−0.056	−0.089***	0.025	−0.184***
Pain (PA)*	−0.148***	−0.147***	−0.085**	0.033	−0.167***
Dyspnea (DY)*	−0.128***	−0.172***	−0.134***	0.003	−0.110***
Sleep disturbance (SL)*	−0.231***	−0.168***	−0.128***	−0.040	−0.233***
Appetite loss (AP)*	−0.131***	−0.122***	−0.114***	0.067**	−0.152***
Constipation (CO)*	−0.064*	−0.030	−0.085**	0.013	−0.123***
Diarrhea (DI)*	−0.072*	−0.063*	−0.117***	0.002	−0.085*
Financial impact (FI)	−0.187***	−0.176***	−0.196***	−0.129***	−0.192***
Global health status and quality of life (GH)*	0.391***	0.181***	0.255***	0.122***	0.468***
Anxiety (HAD-A)*	−0.484***	−0.468***	−0.326***	−0.153***	−0.333***
Depression (HAD-D)*	−0.558***	−0.353***	−0.428***	−0.221***	−0.354***

*Spearman correlation.
†Kruskal-Wallis test.
‡Mann-Whitney U test.
*P < .1.
**P < .05.
***P < .01.

4.1. Limitations

This study had several limitations. First, the sample may not be representative of all patients with gynaecological cancer in China, as patients were recruited from one hospital in western China. Second, the results suggest that patients with gynaecological cancer have better spiritual well-being than patients with other advanced cancers. However, our patients were at different stages of gynaecological cancer, so it is difficult to determine whether the present findings differ from previous findings because of difference in cancer type or differences in cancer staging. Third, the values of adjusted R^2 in the multiple linear regression analysis were relatively small, so the regression models only explained a small portion of the variance in each spiritual well-being dimension.

Table 4

Multivariate analysis of spiritual well-being.

Variable	Std. β (P)	Adj. R^2
Existential (EX)		0.303
Depression (HADS-D)	−0.362 (<.001)	
Global health (GH)	0.156 (<.001)	
Anxiety (HADS-A)	−0.119 (.014)	
Religion (Yes)	−0.082 (.029)	
Relationship with self (RS)		0.271
Anxiety (HADS-A)	−0.523 (<.001)	
Relationship with others (RO)		0.161
Depression (HADS-D)	−0.258 (<.001)	
Global health (GH)	0.099 (.011)	
Relationship with someone or something greater (RSG)		0.077
Religion (Yes)	−0.204 (<.001)	
Depression (HADS-D)	−0.196 (<.001)	
Global-SWB		0.175
Global health (GH)	0.337 (<.001)	
Depression (HADS-D)	−0.144 (<.001)	

4.2. Future directions

Considering the economic and cultural differences among different regions of China, we suggest a multicenter study to investigate the level of spiritual well-being of patients with gynaecological cancer in China. Moreover, future study could compare the level of spiritual well-being of patients in different cancer stage-adjusting other confounding factors. The determinants of spiritual we-being are still equivocal, other potential influence factors need further study to explore.

5. Conclusion

We assessed spiritual well-being and found significant associations between spiritual well-being and quality of life, anxiety and depression. The findings indicated that spiritual well-being is

associated with lower anxiety and depression and better quality of life. Having a formal religious affiliation is associated with higher levels of spiritual well-being. Health providers should provide more spiritual care for non-religious patients to help them to cope with cancer-related stressors. Healthcare providers should combine spiritual care with psychological counselling to help patients with gynaecological cancer, especially those who have low quality of life or severe symptoms, or experience anxiety or depression to cope with distress and the illness experience.

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Association of Religious and Spiritual Factors With Patient-Reported Outcomes of Anxiety, Depressive Symptoms, Fatigue, and Pain Interference Among Adolescents and Young Adults With Cancer

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Abstract

IMPORTANCE The associations of spiritual and religious factors with patient-reported outcomes among adolescents with cancer are unknown.

OBJECTIVE To model the association of spiritual and religious constructs with patient-reported outcomes of anxiety, depressive symptoms, fatigue, and pain interference.

DESIGN, SETTING, AND PARTICIPANTS This cross-sectional study used baseline data, collected from 2016 to 2019, from an ongoing 5-year randomized clinical trial being conducted at 4 tertiary-referral pediatric medical centers in the US. A total of 366 adolescents were eligible for the clinical trial, and 126 were randomized; participants had to be aged 14 to 21 years at enrollment and be diagnosed with any form of cancer. Exclusion criteria included developmental delay, scoring greater than 26 on the Beck Depression Inventory II, non-English speaking, or unaware of cancer diagnosis.

EXPOSURES Spiritual experiences, values, and beliefs; religious practices; and overall self-ranking of spirituality's importance.

MAIN OUTCOMES AND MEASURES Variables were taken from the Brief Multidimensional Measurement of Religiousness/Spirituality (ie, feeling God's presence, daily prayer, religious service attendance, being very religious, and being very spiritual) and the spiritual well-being subscales of the Functional Assessment of Chronic Illness Therapy (meaning/peace and faith). Predefined outcome variables were anxiety, depressive symptoms, fatigue, and pain interference from Patient-Reported Outcomes Measurement Information System pediatric measures.

RESULTS A total of 126 individuals participated (72 [57.1%] female participants; 100 [79.4%] white participants; mean [SD] age, 16.9 [1.9] years). Structural equation modeling showed that meaning and peace were inversely associated with anxiety (β = −7.94; 95% CI, −12.88 to −4.12), depressive symptoms (β = −10.49; 95% CI, −15.92 to −6.50), and fatigue (β = −8.90; 95% CI, −15.34 to −3.61). Feeling God's presence daily was indirectly associated with anxiety (β = −3.37; 95% CI, −6.82 to −0.95), depressive symptoms (β = −4.50; 95% CI, −8.51 to −1.40), and fatigue (β = −3.73; 95% CI, −8.03 to −0.90) through meaning and peace. Considering oneself very religious was indirectly associated with anxiety (β = −2.81; 95% CI, −6.06 to −0.45), depressive symptoms (β = −3.787; 95% CI, −7.68 to −0.61), and fatigue (β = −3.11; 95% CI, −7.31 to −0.40) through meaning and peace. Considering oneself very spiritual was indirectly associated with anxiety (β = 2.11; 95% CI, 0.05 to 4.95) and depression (β = 2.8; 95% CI, 0.07 to 6.29) through meaning and peace. No associations were found between spiritual scales and pain interference.

(continued)

Key Points

Question Among adolescents and young adults with cancer, is there an association between spirituality and patient-reported outcomes, and are these outcomes associated with a sense of meaning, peace, and comfort provided by faith?

Findings In this cross-sectional study of 126 adolescents and young adults with cancer, structural equation modeling revealed that meaning and peace were associated with aspects of spirituality and religiousness as well as anxiety, depressive, and fatigue symptoms.

Meaning In this study, participants' sense of meaning and peace was associated with religiousness and with anxiety and depression, possibly representing an underappreciated intervention target.

+ Supplemental content

Author affiliations and article information are listed at the end of this article.

Abstract (continued)

CONCLUSIONS AND RELEVANCE In this study, multiple facets of spirituality and religiousness were associated with anxiety, depression, and fatigue, all of which were indirectly associated with the participant's sense of meaning and peace, which is a modifiable process. Although these results do not establish a causal direction, they do suggest palliative interventions addressing meaning-making, possibly including a spiritual or religious dimension, as a novel focus for intervention development.

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Introduction

Cancer is the leading cause of disease-related death among US residents aged 15 to 24 years.[1] Despite optimism regarding improving remission rates, adolescents and young adults in treatment continue to experience numerous adverse effects as well as physical, psychological, social, and spiritual comorbidities.[2] Adolescents report anxiety, depressive symptoms, fatigue, and pain interference as among their most debilitating patient-reported outcomes (PROs).[3-5] Palliative care provides symptom management and psychosocial support for patients with serious illness and their families. Symptom management is person-centered and therefore spans the biopsychosocial-spiritual spectrum of concerns.[6]

Coping with anxiety, depressive symptoms, fatigue, and pain interference is multifaceted. Approaches to palliation may be pharmaceutic, psychologic, and, for many people, spiritual. Most of the US population (75%) reports spirituality is at least somewhat important, and 53% report that it is very important to them.[7] Many adolescents and young adults (AYAs) report shifting from institutional religion toward a broader spirituality[8]; this does not mean these issues are unimportant. In a qualitative study of 17 AYAs (aged 14 to 25 years) with cancer,[9] only 31% reported that they were neither spiritual nor religious; most identified as spiritual (whether religious or not).

Spirituality has shown mixed associations with health outcomes. Spiritual struggles[10] have almost consistently been associated with poorer health outcomes, especially mental health outcomes, in both AYAs and adults.[11-13] Studies of religion, spirituality, and anxiety in AYAs are few and have shown mixed results depending on how religion and spirituality were operationalized and whether state vs trait anxiety was measured.[14] A Canadian study showed AYAs aged 15 years and older with pain who were both spiritual and religious had better psychologic well-being scores and used positive coping methods more than those who were not.[17]

Religion and spirituality are recognized as integral components of palliative care practice, although they may be underappreciated constructs in other fields.[6] Religion and spirituality are multidimensional and commonly studied in bivariate analyses with health outcomes. What is unknown are the potential pathways by which religious and spiritual constructs affect PROs. This hinders designing, developing, prototyping, and testing palliative interventions that include religion and spirituality to improve PROs among AYAs with cancer. When cancer occurs during adolescence or young adulthood, there are long-term consequences to adjustment, functioning, and disease self-management. It is important to understand the potential role religion and/or spirituality play in 4 outcomes AYAs with cancer indicate are the most debilitating (ie, anxiety, depression, pain interference, and fatigue) to provide comprehensive therapies. The specific aims of this study were to examine how religious and spiritual factors were individually associated with anxiety, depression, pain interference, and fatigue PROs and to develop a model of how factors comprising spiritual well-being might lie in the pathway of the association of religious and spiritual factors with anxiety, depression, pain interference, and fatigue among AYAs with cancer.

Methods

Participants

This cross-sectional study used existing data from participants at baseline in a 4-site, prospective, longitudinal randomized clinical trial of the Family Centered Advance Care Planning for Teens with Cancer intervention.[18] The sample size for the primary study was determined by a power analysis for the primary outcomes. Data were collected at enrollment, occurring between July 16, 2016, and April 30, 2019. The sites were pediatric tertiary referral hospitals (Children's National Hospital, Washington, DC; Akron Children's Hospital, Akron, Ohio; St Jude Research Hospital, Memphis, Tennessee; and the University of Minnesota Health, Minneapolis). The primary trial was approved by the institutional review boards at participating institutions. Participants were a convenience sample of AYAs with any type of cancer who were treated at these sites at any point after their diagnosis. Inclusion criteria were that participants be aged 14 to 21 years at enrollment; not known to have any developmental delay; have a Beck Depression Inventory total score less than 26; have English as their primary language; not be actively suicidal, homicidal, or psychotic; and be aware of their cancer diagnosis.

Procedures

Methods

After obtaining informed consent from a family member of participants aged 14 to 17 years and assent from the participants and the consent of AYAs aged 18 years and older, baseline data were collected from participants at their first visit. With the AYA alone in a private room, research staff read the questions aloud to the AYA and entered the response into REDCap, unless AYAs requested to enter their own responses.[19] This approach controls for issues of literacy, health literacy, and uncorrected vision, while serving as an engagement strategy and maximizing likelihood of obtaining complete data.

Measures

Covariates (and potential confounders) obtained by medical record review or self-report (ie, age, sex, race, ethnicity, time since diagnosis, treatment status [ie, completed or ongoing], education, household income, and study site) and participants' self-ranking of the importance of religion and spirituality to them were collected. We collected 3 additional measures, as follows: the Patient-Reported Outcomes Measurement Information System (PROMIS),[20-22] the spiritual well-being scale of the Functional Assessment of Chronic Illness Therapy–Version 4 (FACIT-Sp),[23] and the Brief Multidimensional Measurement of Religiousness/Spirituality (BMMRS).[24,25]

PROMIS | We used 4 of the short-form, pediatric PROMIS symptom measures (ie, emotional distress–anxiety; emotional distress–depressive symptoms; fatigue; and pain interference), which were developed and validated for use with pediatric patients to assess health-related quality of life, as the outcome measures in the study. The psychometric properties of these measures when used with pediatric patients with cancer are established.[20,21,26] The measures were developed to yield scores on a T-score scale with a mean of 50 and SD of 10.

FACIT-Sp | This 23-item nontheistic scale is frequently used to study spirituality and has good psychometric properties among adolescents with chronic illness.[27,28] The FACIT-Sp has 2 subscales: meaning and peace (items 1-8; eg, "I feel peaceful," "I have a reason for living") and faith (items 9-12; eg, "I find comfort/strength in my faith," "My illness has strengthened my faith or spiritual beliefs"). A higher score indicates better spiritual well-being.

BMMRS | The BMMRS is a multidimensional, 38-item, self-administered questionnaire evaluating religious and spiritual dimensions. The scale has demonstrated validity and reliability among

adolescent populations.[16,26,27] For the purposes of this study, investigators a priori identified 5 items associated with and sensitive to quality of life outcomes[26,30] and end-of-life decision-making[31] based on their previous research with adolescents,[30] as follows: feeling God's presence, praying privately, attending religious services, identifying as religious, and identifying as spiritual. A higher score indicates higher religiousness and/or spirituality.

Statistical Analysis

Descriptive sample statistics were reported for social demographic characteristics and outcomes. The religious and spiritual measures were dichotomized (**Table 1**). The binary associations of religious and spiritual measures with patient self-reported PROMIS measures (ie, anxiety, depression, pain interference, and fatigue) were explored using *t* tests. Structural equation modeling was used to estimate the conceptual model (specified a priori and depicted in the eFigure in the Supplement), in which religious and spiritual measures were associated with the PROMIS symptoms through 2 latent variables (meaning and peace with 8 indicators and faith with 4 indicators, as shown in **Table 2**), respectively. The basis for the model specification was prior work positing meaning and peace between religious and spiritual beliefs and practices and health outcomes, and work on meaning and peace and depression as well as spiritual struggle and depression.[32-36]

The structural equation model was estimated using Bayesian estimator in Mplus 8.3 (Muthén and Muthén) that has superior performance in small samples without reliance on asymptotic and data normality assumptions.[36-38] The Bayesian approach is a full-information estimator using all available data under a missing-at-random assumption. Such a full information approach is superior to traditional approaches, such as listwise deletion, pairwise deletion, and similar response pattern imputation.[40-42] The missing-at-random assumption is more plausible than the missing-completely-at-random assumption in traditional statistical methods, allowing missingness to be associated with observed covariates and/or outcome measures.[37,38,43]

The convergence of Bayesian estimation was evaluated by potential scale reduction (PSR). If PSR is close to 1 (eg, between 1.0 and 1.1) for all parameters in the model, it indicates that convergence has been achieved. The goodness of fit of the model was assessed by posterior predictive checking.[44] If the model fits data well, the 95% CI of the difference between the observed and replicated χ^2 statistics should center around 0, and the posterior predictive *P* value should be greater than .05.[38,44] Statistical inferences were made by examining the range of parameter estimates that captured 95% of the posterior probability distribution (ie, 95% Bayesian credibility interval, CrI). If the 95% CrI of a parameter estimate did not cover 0, then it was considered statistically significant at 2-tailed $\alpha = .05$ level.[39,45,46]

Results

A total of 336 AYAs with cancer who were potentially eligible for the parent study were approached. Of these, 203 AYA (60.4%) declined and 3 (0.9%) did not meet secondary eligibility criteria for decision-making, yielding an enrollment rate of 38.7%. Eligible individuals who declined to indicate their racial identification also declined participation in the trial. A total of 126 AYAs completed baseline assessments; the sample had a mean (SD) age of 16.9 (1.9) years, with 72 (57.1%) female participants, 100 (79.4%) white participants, and 76 (60.3%) Protestant participants. Demographic characteristics are presented in Table 2. Descriptive statistics for PROMIS, FACIT-Sp, and religious and spiritual measures are provided in **Table 3**; binary associations between PROMIS and religious and spiritual measures appear in Table 1. The internal consistency of the FACIT-Sp subscale measures was good, with a Cronbach α of 0.79 for meaning and peace as well as faith. Binary associations of PROMIS with religious and spiritual measures are reported in Table 1.

Bayesian estimation of the model reached convergence (PSR <1.10) after 5000 iterations, and the PSR did not bounce over more iterations. The 95% CrIs for the difference between the observed and the model estimated χ^2 statistics (−46.547 to 64.334) centered around 0, and the posterior

Table 5. Selected Results of Structural Equation Modeling Using Bayesian Approach[a]

Variable	β (95% CI)									
	PROMIS anxiety		PROMIS depression		PROMIS pain interference			PROMIS fatigue		
	Association through path	Association through meaning and peace	Association through path	Association through meaning and peace	Association through path	Association through meaning and peace	Association through path	Association through meaning and peace	Association through path	Association through meaning and peace
Association with beliefs	0.94 (−1.21 to 3.13)	NA	0.84 (−1.30 to 3.11)	NA	0.87 (−1.88 to 3.46)	NA	2.12 (−0.05 to 5.46)	NA		
Association with meaning and peace	NA	−7.94 (−12.88 to −4.12)[b]	NA	−10.46 (−15.58 to −6.50)[b]	NA	−3.43 (−7.20 to 1.06)	NA	−8.56 (−15.34 to −3.63)[b]		
Fear of recurrence	0.82 (−1.17 to 3.16)	−1.17 (−6.62 to −0.95)[b]	0.74 (−1.23 to 3.12)	−4.50 (−8.53 to −1.40)[b]	0.38 (−1.80 to 3.38)	−0.96 (−3.60 to 0.83)	1.88 (−0.77 to 5.14)	−1.71 (−6.03 to −0.50)[b]		
Daily prayer	0.05 (−0.55 to 0.58)	0.43 (−1.86 to 2.88)	0.64 (−0.54 to 0.92)	0.56 (−3.43 to 1669)	0.68 (−0.66 to 0.98)	0.66 (−0.76 to 1.15)	0.15 (−0.86 to 1.75)	0.45 (−3.13 to 1.15)		
Religious service	−0.7 (−1.26 to 0.46)	0.81 (−1.44 to 3.19)	−0.65 (−1.03 to 0.49)	1.10 (−1.83 to 4.35)	−0.03 (−1.03 to 0.87)	0.15 (−0.61 to 1.44)	−0.19 (−1.88 to 0.80)	0.83 (−1.61 to 3.93)		
Very religious	0.66 (−0.55 to 2.83)	−2.81 (−6.06 to −0.45)[b]	0.58 (−1.07 to 3.67)	−3.77 (−7.68 to −0.61)[b]	0.48 (−1.61 to 3.75)	−0.78 (−3.23 to 0.78)	1.56 (−0.67 to 4.81)	−3.11 (−7.31 to −0.40)[b]		
Very spiritual	0.16 (−0.39 to 1.20)	2.11 (0.05 to 4.95)[b]	0.69 (−0.41 to 3.13)	2.84 (0.07 to 6.59)[b]	0.05 (−0.59 to 1.30)	0.56 (−0.58 to 2.43)	0.27 (−0.66 to 1.95)	2.11 (0.04 to 5.82)[b]		

Abbreviations: NA, not applicable; PROMIS, Patient-Reported Outcomes Measurement System.

[a] After 50 000 iterations, the highest potential scale reduction was 1.0008; 95% CI for the difference between the observed and the replicated χ^2 values, 46.943 (44.334 posterior predictive).

[b] $P < .05$.

predictive P value was .37, indicating a good model fit. Selected structural equation modeling results are shown in **Table 4**. Meaning and peace were significantly inversely associated with anxiety (β = −7.94; 95% CI, −12.88 to −4.12), depression (β = −10.49; 95% CI, −15.92 to −6.50), and fatigue (β = −8.901; 95% CI, −15.34 to −3.61). Several religious and spiritual variables also had significant inverse associations with PROMIS outcomes through associations with meaning/peace. Feeling God's presence daily and considering oneself very religious were inversely associated with anxiety (feeling God's presence: β = −3.37; 95% CI, −6.82 to −0.95; very religious: β = −2.81; 95% CI, −6.06 to −0.45) and with depression (feeling God's presence: β = −4.50; 95% CI, −8.51 to −1.40; very religious: β = −3.77; 95% CI, −7.68 to −0.62). Considering oneself very spiritual was positively associated with anxiety (β = 2.11; 95% CI, 0.05 to 4.95) and depression (β = 2.84; 95% CI, 0.07 to 6.29). Feeling God's presence daily and considering oneself very religious were associated with fatigue (feeling God's presence: β = −3.73; 95% CI, −8.03 to −0.90; very religious: β = −3.11; 95% CI, −7.31 to −0.40).

Table 2. Descriptive Statistics of Variables Used in Model Among 126 Adolescents and Young Adults

Variable	Statistics
PROMIS measures, mean (SD)	
PROMIS anxiety T-score	46.7 (9.4)
PROMIS depression T-score	45.0 (9.9)
PROMIS pain interference T-score	43.8 (10.1)
PROMIS fatigue T-score	45.4 (12.5)
FACIT-Sp measures, mean (SD)	
Meaning and peace: 8 items; Cronbach α = 0.79	
1. I feel peaceful	3.1 (1.0)
2. I have a reason for living	3.8 (0.5)
3. My life has been productive	3.3 (0.9)
4. I have trouble feeling peace of mind*	3.2 (1.2)
5. I feel a sense of purpose in my life	3.6 (0.8)
6. I am able to reach down deep into myself for comfort	3.1 (1.0)
7. I feel a sense of harmony within myself	2.9 (1.0)
8. My life lacks meaning and purpose*	3.6 (0.9)
Faith: 4 items; Cronbach α = 0.79	
9. I find comfort in my faith or spiritual beliefs	2.9 (1.3)
10. I find strength in my faith or spiritual beliefs	2.8 (1.4)
11. My illness has strengthened my faith or spiritual beliefs	2.6 (1.6)
12. I know that whatever happens with my illness, things will be okay	3.5 (0.8)
Brief MMRS variable, No. (%)	
1. I feel God's presence	
Many times a day or every day	39 (31.0)
Most days, some days, once in a while, or never or almost never	83 (65.8)
12. How often do you pray privately, that is, how often do you pray in settings other than a church, synagogue, mosque, or other place of worship and at times when you are not attending functions of a religiously based group?	
More than once a day or once a day	37 (29.4)
A few times a week, once a week, a few times a month, once a month, less than once a month, or never	87 (69.1)
14. How often do you go to religious services?	
More than once a week or every week or more often	41 (32.5)
Once or twice a month, every month or so, once or twice a year, or never	82 (65.1)
17. To what extent do you consider yourself a religious person?	
Very religious or moderately religious	72 (57.1)
Slightly religious or not religious at all	54 (42.9)
18. To what extent do you consider yourself a spiritual person?	
Very spiritual or moderately spiritual	68 (53.9)
Slightly spiritual or not spiritual at all	58 (46.0)

Abbreviations: FACIT-Sp, spiritual well-being subscales of the Functional Assessment of Chronic Illness Therapy; MMRS, Multidimensional Measurement of Religiousness/Spirituality; PROMIS, Patient-Reported Outcomes Measurement Information System.

* Scores reversed, so that 0 indicates very much and 4 indicates not at all.

Thus, an AYA reporting higher anxiety, depression, or fatigue was highly likely to also report lower levels of meaning/peace and of feeling God's presence daily. There were no significant findings for pain interference among the PROs or for daily prayer or attending religious services weekly among the religiousness variables.

Discussion

To our knowledge, this is the first study to document an indirect association of meaning and peace with religiousness and spirituality as well as the likelihood of anxiety, depressive symptoms, and fatigue in AYAs with cancer. Specifically, this study went beyond a bivariate approach, demonstrating that feeling God's presence and identifying as a very religious person were associated with the extent of anxiety, depressive symptoms, and fatigue. The model proposes an indirect association through a sense of meaning and peace. Although the causal direction of these associations cannot be established from our study, these results suggest that a novel and potentially efficacious intervention

Table 3. Demographic and Medical Data for Individuals Enrolled and Eligible but Declining to Participate in the Study

Characteristic	No. (%)		P value
	Enrolled (n = 126)	Declining to participate (n = 281)[a]	
Age, mean (SD), y	16.9 (1.9)	16.7 (1.8)	.21[b]
Religious affiliation			
Agnostic/atheist/none	24 (19.0)	NA	NA
Christian	90 (71.4)	NA	NA
Hindu	1 (0.8)	NA	NA
Jehovah's Witness	1 (0.8)	NA	NA
Jewish	1 (0.8)	NA	NA
LDS/Mormon	6 (4.8)	NA	NA
Missing	3 (2.4)	NA	NA
Sex			
Female patients	72 (57.1)	82 (41.4)	.01[c]
Male patients	54 (42.9)	115 (58.1)	
Declined to answer	0	1 (0.5)	
Race			
American Indian or Alaska Native	0	1 (0.5)	.23[c]
Asian	3 (2.4)	4 (2.1)	
Black or African American	17 (13.5)	20 (10.4)	
White	100 (79.4)	158 (82.3)	
>1 race	5 (4.0)	2 (1.0)	
Declined to answer	1 (0.8)	7 (3.6)	
Ethnicity			
Hispanic or Latino	5 (4.0)	6 (3.1)	.88[c]
Not Hispanic or Latino	116 (92.1)	176 (92.1)	
Declined to answer	5 (4.0)	9 (4.7)	
Diagnosis			
Leukemia	42 (33.3)	51 (26.7)	.41[c]
Lymphoma	19 (15.1)	39 (20.4)	
Solid tumors	34 (27.0)	47 (24.6)	
Brain tumor	25 (20.8)	38 (19.9)	
Other	6 (4.8)	12 (6.3)	
Unknown	0	4 (2.1)	
On active treatment[d]			
Yes	27 (21.4)	12 (17.6)	.51[c]
No	99 (78.6)	56 (82.4)	

Abbreviation: NA, not applicable.

[a] Age available for 195 eligible and declining patients; sex, 198; race, 192; ethnicity, 199; diagnosis, 199; on active treatment, 68.

[b] Two-sided P values were reported from t test.

[c] Two-sided P values were reported from Fisher exact test.

[d] Two-sided P values were reported from Pearson χ^2 test.

[e] For declining patients, partial data were only collected.

target may be a sense of meaning and peace when considering ways to improve anxiety, depression, and fatigue among AYAs with cancer.

Findings from the present study are also consistent with previously published theoretical models and empirical data. Park's work on meaning, including religious and spiritual meaning,[10,47,48] posits that religious and spiritual beliefs and practices inform constructed meaning, which is related to health outcomes. Meaning-making coping mediates the association of religiosity with psychological adjustment.[11] Religion and spirituality are not important to all AYAs; Salsman and colleagues[49] recommend identifying subgroups for whom dimensions of religion and spirituality are important to their health-related quality of life and offering them interventions that include religion and/or spirituality.[49]

The meaning of a cancer diagnosis is an important factor for AYAs and the adults living with them.[47,48,50,51] Clinical attention to constructing meaning of the cancer experience is an important element in improving outcomes.[52] Barakat and colleagues[52] reported that although distress continued because of having had cancer, finding positive meaning contributed to posttraumatic growth in a sample of 750 AYA cancer survivors and their parents. This is also consistent with findings from a metasynthesis by Kim and colleagues of 51 qualitative studies,[53] which revealed that constructed meaning fosters resilience and inner growth and that the benefits persist well into survivorship. They noted the different meanings of an adolescent's cancer experience from their parents' and suggested that care be individualized for patients and for patient-parent dyads to maximize outcomes. Rosenberg and colleagues reported[54,55] positive outcomes (ie, resilience, cancer-related quality of life, distress) with skills-based intervention for AYAs with cancer that

Table 4. Bivariate Associations of Spiritual and Religious Items With Patient-Reported Outcomes for 126 Adolescents and Young Adults

Brief MMRS Variable	PROMIS, mean (SD)			
	Anxiety T-score	Depression T-score	Pain interference T-score	Fatigue T-score
1. I feel God's presence				
Many times a day or every day (n = 78)	44 (9.7)	42.6 (9.7)	44.5 (11)	45.5 (14)
Most days, some days, once in a while, or never or almost never (n = 83)	48 (9.1)	46.2 (9.8)	43.2 (9.8)	45.1 (11.7)
P value	.03	.06	.12	.93
12. How often do you pray privately, that is, how often do you pray in settings other than a church, synagogue, mosque, or other place of worship and at times when you are not attending functions of a religiously based group?				
More than once a day or once a day (n = 37)	45.4 (9.4)	42.3 (8.6)	44.8 (10.8)	44.9 (12.5)
A few times a week, once a week, a few times a month, once a month, less than once a month, or never (n = 87)	47.4 (9.5)	46.1 (10.3)	43.6 (10.2)	45.7 (12.5)
P value	.29	.10	.54	.75
14. How often do you go to religious services?				
More than once a week or every week or more often (n = 41)	44.8 (9.1)	44.1 (10.4)	45.7 (11.4)	44.5 (13.8)
Once or twice a month, every month or so, once or twice a year, or never (n = 82)	47.9 (9.5)	45.4 (9.7)	43.2 (9.8)	46.1 (11.8)
P value	.09	.42	.21	.58
17. To what extent do you consider yourself a religious person?				
Very religious or moderately religious (n = 72)	46.1 (9.6)	43.8 (9.7)	43.5 (10.4)	44.2 (12.7)
Slightly religious or not religious at all (n = 54)	47.6 (9.2)	46.9 (10)	44.2 (10.4)	47 (12.1)
P value	.28	.06	.71	.21
18. To what extent do you consider yourself a spiritual person?				
Very spiritual or moderately spiritual (n = 68)	46.1 (10.4)	44.8 (10.2)	44.2 (10.6)	46.9 (13)
Slightly spiritual or not spiritual at all (n = 58)	44.7 (7.8)	43 (9.2)	43.4 (10)	43.6 (11.7)
P value	.62	.03	.67	.14

Abbreviations: MMRS, Multidimensional Measurement of Religiousness/Spirituality; PROMIS, Patient-Reported Outcomes Measurement Information System.

included meaning as a component. Moskowitz and colleagues[60] reported improved outcomes in positive affect, antidepressant use, and intrusive or avoidant thoughts using an intervention that included constructed meaning.

The current study's findings support the inclusion of constructed meaning as part of AYA oncology care.[61] This approach has also been recognized by the government of the Netherlands, which recently adopted a person-centered definition of health, including attention to meaning and meaninglessness.[62] Furthermore, that country's health budget provides for care at home by a recognized spiritual caregiver to address issues of illness-related meaning, focusing on persons older than 50 years and palliative care patients (including children) and their families.[63] Demonstration of the effects of these outcomes is in progress.

We anticipated finding an association between spiritual constructs and PROs and did not find one. It is possible that no such association exists in this population. It may also be because of the way faith was operationalized. The FACIT faith subscale quantifies the degree of comfort and strength faith provides rather than the magnitude of its importance. Although comfort and strength of faith were not associated with the PROs measured, the actual importance of faith may be motivational, prohealthy behaviors that may relate to PROs. The current study also assessed how pain interferes with life and found no relationship with spiritual or religious variables. Wachholtz and colleagues[64] reviewed the religious and spiritual literature related to pain, noting that the mixed results between religion, spirituality, and pain may be the result of focusing on a single aspect of the multidimensional experience of pain. Pain interference may not be an aspect of pain associated with the religious and spiritual constructs quantified by the measures used in this study. It is also possible that the model used by Wachholtz and colleagues[64] is not fully applicable for AYAs.

This study has important clinical implications. All pediatricians and adolescent medicine specialists should practice primary palliative care to minimize AYAs' suffering in any form. Primary palliative care comprises basic evaluation and management of symptoms and facilitated conversations about goals of care and advance care planning.[65] Although many pediatric providers may be reluctant to address these issues, AYAs want providers to address their concerns, including spiritual concerns, and their desire for these to be addressed increases with their disease acuity.[61-63] Steinhauser and colleagues have demonstrated the efficacy of a 1-question intervention among adults, asking, "Are you at peace?"[66] Such simple, nonthreatening interventions may be a feasible way to explore the topic of peace with AYAs. Their sense of peace and their expressed needs for dealing with death and dying may provide opportunities for the broader use of interdisciplinary palliative care teams.

Specialty care addressing meaning and peace to improve outcomes may take several forms. Referrals to psychologists, who routinely deal with issues of spirituality, meaning, and health, may be appropriate.[32,33] Individual and group interventions addressing meaning for people with cancer have shown efficacy for increasing spiritual well-being and for decreasing anxiety, depression, and pain.[60,68] Referrals for specialty spiritual care from clinically trained chaplains may also be beneficial.[69] Chaplains are trained to work with existential questions of meaning within the framework of the patient's beliefs.[70,71]

Meaningful conclusions can be drawn from this study, moving the state of the science of spirituality forward.[72] Meaning-making is a complex[73] but modifiable process. Clinical application of these findings could facilitate further integration of religious considerations and meaning-making into pediatric palliative care,[74] as has been demonstrated with adults.[75]

Limitations

This study has several limitations. Cross-sectional data do not permit examination of causality, and longitudinal data were not available. There are no universally accepted definitions of spirituality and religion among researchers.[76,77] Participants self-defined these terms when completing the questionnaires; the results may be confounded through the use of multiple definitions, although there is evidence that AYAs define these terms similarly to some researchers.[78,79] Several factors limit

generalizability. First, it is not possible to generalize beyond the participating population, ie, English-speaking individuals aged 14 to 21 years with cancer in the United States. Second, the sample size dictated a parsimonious model that could not include potential confounders or predicting variables. Finally, the religious and spiritual affiliations of participants did not reflect the US demographic characteristics for this age group. There was a risk of participants providing socially desirable responses by having questions read aloud, although responses were entered by a research assistant who was trained to ask the questions in a way that would minimize bias. If adolescents preferred to enter their own responses, they were permitted, this rarely occurred. Furthermore, this was an analysis of baseline data informing an advance care planning trial. Male patients were more likely to decline participation in the primary study; thus, selection bias may affect the generalizability of these results. Nevertheless, strengths of this study include the application of rigorous scientific methods. First, 39% of those approached agreed to participate. While this is lower than participation rates in psychosocial intervention trials and represents a limitation,[79] it is better than the 20% or lower participation rates of individuals aged 15 to 19 years in clinical trials, an enrollment problem identified by the US Centers for Disease Control and Prevention.[80-82] Second, use of validated and reliable questionnaires increased replicability and transparency. Third, 99.5% of the data were complete. Fourth, the use of structural equation modeling to identify indirect associations between meaning and peace and/or faith on physical and emotional symptoms addresses weaknesses in the rigor of previous research.

Conclusions

Study results demonstrated how multiple facets of religion and spirituality were associated with anxiety, depression, and fatigue among AYAs with cancer, which were associated with their sense of meaning and peace. Future research based on this study could explore the extent to which it represents a novel and potentially efficacious focus for intervention development to improve quality of life for AYAs after a cancer diagnosis.

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SUPPLEMENT.

eFigure. Initial Model of the Role of Spirituality (Meaning/Peace and Faith) and Religiousness on Patient-Reported Symptoms Among Adolescents and Young Adults With Cancer: Structured Equation Model

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PAPER

WILEY

Religious comfort and anxiety in women with cancer: The mediating role of hope and moderating role of religious struggle

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Abstract

Objective: Religiosity is an important source of consolation among individuals suffering from cancer. However, religion does not always bring comfort. Religious struggles elicit stress. We examined whether religious comfort predicts anxiety in patients diagnosed as having cancer. Hope was examined as a mediator and religious struggle as a moderator in this relationship.

Methods: In this cross-sectional, descriptive-analytical research, 77 Polish women with cancer were selected using sequential convenience sampling. Data were collected using the Religious Comfort and Strain Scale, the Adult Hope Scale, and the State-Trait Anxiety Inventory. A statistical procedure using Pearson's correlation coefficient and multiple regression was employed.

Results: Religious comfort correlated negatively with anxiety (.007) and positively with hope (.006). Hope correlated negatively with anxiety (.011). Hope was a mediator in the relationship between religious comfort and anxiety: indirect effect (IE) = −0.07; 90% CI, −0.161 to −0.001. Patients who derive more comfort from religion feel stronger hope and, consequently, lower anxiety. The index of moderated mediation (IMM) was significant when we introduced fear-guilt as a moderator: IMM = 0.07; 90% CI, 0.001-0.007. Thus, the effect of religious comfort on anxiety reduction through hope is bigger if the experience of religious fear-guilt is smaller.

Conclusions: Religion appears to protect against developing anxiety because it enhances hope. However, religious guilt can stop cancer patients from using their religious resources.

KEYWORDS
anxiety, cancer, hope, oncology, religious comfort, religious strain

1 | BACKGROUND

Religiosity is an important source of comfort in illness, especially for people suffering from cancer. Religiosity can be defined as a personal or group search for the sacred that unfolds within a traditional sacred context.[1] There is ample evidence demonstrating relationships between religiosity and psychosocial adjustment in cancer patients.[2,3] In a study of prostate cancer patients, intrinsic religiosity was found to be negatively associated with depression.[4] In a sample of women diagnosed with breast cancer, psychological well-being was positively related to their religiosity.[5] These findings suggest that religion can provide a level of comfort that enables individuals to manage distress and effectively foster well-being. However, religion does not always bring comfort as religion-related difficulties

can elicit stress and struggle. While religious comfort reflects personal benefits derived from faith, religious struggles are experiences of conflict or distress that refer to religious issues.[4] Recent research has found links between religious struggles and reduced immune functioning, greater emotional distress, and depression.[7,8]

Relationships between religion and mental health can be mediated or moderated by other psychological factors, which can lead to either positive or negative outcomes. One of the potential mediators can be hope, which has been found consistently to be associated with well-being and adjustment to illness.[9] Hope can be understood as the perceived ability to produce pathways to achieve desired goals and to motivate an individual to use those pathways.[10] A premise of hope theory is that knowledge provides important information that is necessary in the pursuit of goals.[11] For many people, religion is an important philosophical orientation that affects their understanding of the world, and that makes reality and suffering understandable and bearable.[12] Thus, religious meaning-oriented system can play a key role by providing hope—a "fighting spirit" for coping with cancer.[11] Hope has been found to act as a mediator in associations of religiosity and spirituality with depressive symptoms in primary care adults[13] and between social support and depression in cancer patients.[14] Examining psychological adjustment among breast cancer survivors in relation to hope and coping, Stanton and colleagues found that women who were low in hope found turning to religion more helpful than did women who were high in hope.[15] However, the mediational effects of hope in the relationship between religious struggles and anxiety have not been examined directly in cancer patients.

Although religion is related to hope and well-being, different forms of religiosity may be differentially related to hope, in turn affecting the level of well-being of cancer patients. This raises the question of potential moderation in the relationships between religious comfort, hope, and anxiety. Research showed that religious struggles embedded in negative religious coping strategies have been found to be associated with negative states in cancer patients, including poorer quality of life, greater distress and lower life satisfaction.[16-19] Elsewhere, cancer patients who experienced a sense of struggle with their faith reported lower levels of social health, whereas those who reported deriving a sense of equanimity and inner harmony from their religious behavior showed favorable levels of social health.[3] Research has also demonstrated links between religious struggles and growth, notably when people find meaning in such struggles, use positive religious coping strategies, and experience religious assimilation.[7,20]

In addition, the type of religious struggle can differentially influence people's well-being. Transitory religious struggles tend to lead to spiritual growth, whereas chronic religious struggles cause emotional distress and have detrimental effects on well-being.[20] Religion can thus support or impede cancer patients' well-being and stress-related growth. Research demonstrated that positive feelings toward God do not exclude the possibility of negative feelings, but the mechanisms of these relationships still remain an open question.[21,22]

We have assumed that the presence of religious struggles may hinder or even prevent the use of religion in the context of cancer. Thus, we think that if religious cancer patients see God as untrustworthy or cruel or feel unforgiven by God, they may have difficulty in drawing on their religious resources. This mechanism can be in part understood within the conservation of resources (COR) theory, which focuses on stress-motivation[23] and predicts that when individuals' personal resources (eg, religion) are threatened, a response mechanism is triggered to defend against this loss of resources. According to this theory, religion is a resource that can be beneficial for people with cancer. However, when religion contains negative forms, such as feelings of fear, guilt, anger toward God, or negative social interactions about religion, it can cause negative consequences (eg, anxiety).

1.1 | Aim of the study

The aim of the research was to analyze the relationship between religious comfort and anxiety among women diagnosed with cancer. Specifically, its aim was to examine whether hope is a mediator through which religious comfort influences anxiety. We hypothesized that female cancer sufferers with higher levels of religious comfort would have lower anxiety, in part because of the hope that such religious support provides and that in turn reduces anxiety. Both a vital part of many religious traditions and the empirical findings have indicated that religion can be an important source of hope, especially in ill people.[24-26] However, we proposed that this religious comfort-hope-anxiety effect would be stronger among women experiencing fewer religious struggles since struggles may hinder or even prevent the use of religion in the context of cancer. This expectation is in line with Fitchet and collaborators' claims that religious guilt or doubt can burden the use of religion as a source of comfort and strength.[27] We tested three types of religious struggles as moderators of the religious comfort-hope-anxiety relationship: fear-guilt, negative emotions toward God, and negative social interactions about religion.

2 | METHODS

2.1 | Study design

This cross-sectional study was conducted at oncology hospitals in Kielce, Lublin, and Warsaw for the 10 months between April 2016 and February 2017.

2.2 | Participants

Patients diagnosed with cancer and admitted to the inpatient oncology floor were interviewed, after giving their informed consent. Further inclusion criteria were as follows: being female, a confirmed diagnosis of cancer, undergoing chemotherapy or radiotherapy treatment, aged over 18 years, willing to participate voluntarily in the study, and being physically able to complete the tests. The exclusion criteria were as follows: having another type of major mental or physical comorbidity that would confound responses and undergoing terminal treatment. Data were collected from participants individually,

and the questionnaires were administered by an interviewer. The average time for completing the tests was 30 min. Fourteen cases with incomplete data were dropped from the analyses.

2.3 | Data collection

Prior to participation, informed consent was obtained in accordance with the Ethical Standards and Procedures for Research in Social Sciences, approved by the Departmental Ethics Committee of the John Paul II Catholic University of Lublin, Poland.

Data collection was carried out via questionnaires. The first of these investigated participants' demographics, including age, type of cancer, marital status, place of residence, and religious affiliation.

2.3.1 | Religious Comfort and Strain Scale

A Polish adaptation of the Religious Comfort and Strain Scale (RCSS) by Exline et al[21] was used to assess religious comfort and struggle.[6] This tool consists of 24 items designed to assess the degree to which participants experience feelings of comfort or stress associated with religion. The scale includes four subscales: Religious Comfort (eg, *Seeing your beliefs as a source of strength*), Fear-Guilt (Fearing that God will condemn you *for your mistakes*), Negative Emotions toward God (NEG; *Feeling angry at God*), and Negative Social Interactions about Religion (NSIR; *Having bad memories of past experiences with religion or religious people*).[6,28] Participants were asked the following question: "To what extent do you currently experience these feelings?" Items were scored on a 12-point scale ranging from 0 = *Not at all* to 11 = *Extremely*. The factorial structure, construct validity, and reliability of the Polish RCSS were confirmed.[6]

2.3.2 | Adult Hope Scale

A Polish adaptation of the 12-item Adult Hope Scale (AHS) by Snyder et al[29] was used to assess hope.[30] The AHS measures the overall level of hope for success and comprises two scales: Agency (eg, *I am able to consider many ways to get out of trouble*) and Pathways (*Even if others give up, I know I can find a way to solve the problem*). Its 12 items are scored on an eight-point scale ranging from *Completely not true* to *Completely true*. The validity of the AHS was determined through content validity after being translated into Polish, and its reliability was determined using Cronbach's alpha coefficient. Studies demonstrated acceptable internal consistency, test-retest reliability, and convergent-discriminant validity of the Polish AHS.[30]

2.3.3 | The STAI

A Polish version of the 40-item State-Trait Anxiety Inventory (STAI) by Spielberger, Gorsuch, and Lushene,[31] adapted by Wrześniewski et al,[32] was used to assess anxiety. The STAI has two subscales: State Anxiety, which measures a temporary condition experienced in specific situations, and Trait Anxiety, which measures a general tendency to perceive situations as threatening.[31] We only used the State Anxiety items. Responses indicated intensity of feeling on a four-point scale ranging from *Not at all* to *Very much*. The construct validity and reliability of the STAI has been demonstrated in previous studies by Wrześniewski et al.[32]

2.4 | Statistical analysis

SPSS software version 24 was used for the analysis. Descriptive statistics are presented as means and standard deviations for quantitative variables and as counts and percentages for categorical variables. Pearson's correlation coefficient was used to establish the relationships between the key constructs measured by the RCSS, AHS, and STAI.

The PROCESS macro[33] was used for mediation and moderated mediation analyses. PROCESS is a linear regression-based framework that estimates indirect effects (IE) and bias-corrected confidence intervals. Mediation facilitates researchers in answering questions of "how" and moderation in answering questions of "when." Moderated mediation analysis facilitates researchers to answer "how" and "why" questions together.[33] Mediation analysis was performed to examine hope as a mediator in the relationship between religious comfort and anxiety. Moderated mediation analysis was performed to examine whether the mediating role of hope in the relationship between religious comfort and anxiety differs across high and low religious struggles (Figure 1).

First, we checked which moderators—Fear-Guilt, NEG, or NSIR—were significant, as indicated by the index of moderated mediation (IMM). Then, the indirect effects were examined at different values of religious struggles: at the mean value, at one standard deviation above the mean (high), and at one standard deviation below the mean (low). All analyses were based on 5000 bootstrapped samples and the corresponding 90% confidence intervals were computed. Standardized coefficients are presented.

3 | RESULTS

3.1 | Sociodemographics

Out of 200 cancer patients who were approached, 91 agreed to participate but only 77 had complete data. All 77 participants were in the 20- to 70-year age range, the mean being 52 years (SD = 10.97) and the median being 55 years (IQR_L = 43, IQR_U = 60.5). Most of these participants were married (81.8%), 15.6% were single, and the remaining 2.6% were widowed. In terms of religious affiliation, 85.7% identified themselves as Catholic, 7.8% as Protestant, and 6.5% as Orthodox.

3.2 | Cancer profile

Regarding the type of cancer, most cases were breast cancer (n = 44), followed by ovarian (n = 22), blood (n = 7), thyroid (n = 3), and stomach

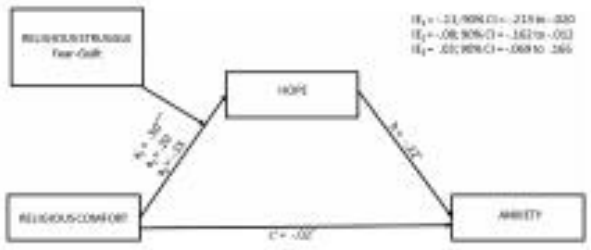

FIGURE 1 A visual representation of the moderated mediation model. Standardized pathways of the mediating role of hope in the connection between religious comfort and anxiety moderated by fear-guilt. *Note.* IE = indirect effects of the religious comfort-hope-anxiety relationship at low (IE_1), moderate (IE_2), and high (IE_3) levels of fear-guilt; a = effects of religious comfort on hope at low (a_1), moderate (a_2), and high (a_3) = levels of fear-guilt; b = effect of hope on anxiety; c' = direct effect of religious comfort on anxiety while controlling for hope. $^{\dagger}P = .10$, $^{*}P < .05$, $^{***}P < .001$

(*n* = 1) cancer. Time since diagnosis in participating patients was, on average, 12.03 ± 8.07 months.

3.3 | Religious comfort, religious struggle, hope, and anxiety in the sample

Our preliminary data analysis comprised calculating the coefficients of skewness by applying the Kolmogorov-Smirnov (K-S) test with Lilliefors correction for each construct. The K-S test showed that the mean scores on the Fear-Guilt (1.31), NEG (1.42), and NSIR (0.34) subscales comprised more "low" values whereas the mean scores on the Religious Comfort (−0.52) and Hope (−0.75) subscales comprised more "high" values. However, the skewness was not sufficiently strong and so could be ignored. Mean scores on the Anxiety subscale were normally distributed. Cronbach's alpha values for the subscales were either good or excellent (Table 1).

TABLE 1 Descriptive statistics and correlations between religious comfort, struggle, hope, and anxiety

	Comfort	Fear-Guilt	NEG	NSIR	Hope	Anxiety
Comfort	–					
Fear-guilt	.06	–				
NEG	−.38***	.51***	–			
NSIR	−.15	.49***	.34**	–		
Hope	.31**	−.08	.02	−.10	–	
Anxiety	−.30**	.32**	.25*	.24†	−.29*	–
M	4.31	1.76	1.25	2.90	5.88	2.32
SD	3.47	2.04	1.67	1.81	0.69	0.52
Alpha	0.98	0.83	0.91	0.71	0.85	0.90

Abbreviations: NEG, Negative Emotions toward God; NSIR, Negative Social Interactions about Religion.

†P < .05.

**P < .01.

***P < .001.

3.4 | Association of religious comfort and struggle with hope and anxiety

Religious comfort was found to be related positively to hope (.006) and negatively to anxiety (.007). Anxiety was related positively to fear-guilt (.005), negative emotions toward God (.03), and negative social interactions about religion (.037). Hope was found to be negatively related to anxiety (.011). No associations were found between religious struggle and hope (Table 1).

3.5 | Mediation analysis

Hope was a significant mediator in the relationship between religious comfort and anxiety (IE = −0.07; 90% CI = −0.143 to −0.009). Religious comfort enhanced hope (0.31; .006), which in turn reduced anxiety (−0.22; .06). The direct effect of religious comfort on anxiety was also significant (−0.24; .041), indicating that the mediation was partial.

3.6 | Moderated mediation analysis

Fear-guilt was a significant moderator of the indirect effect of religious comfort on anxiety through hope (IMM = 0.07; 90% CI = 0.004-0.162) (Figure 1). The indirect effect of religious comfort on anxiety as mediated by hope was apparent only among patients who experienced low (IE = −0.011; 90% CI = −0.209 to −0.017) fear-guilt. Among those experiencing a moderate (IE = −0.04; 90% CI = −0.115 to 0.004) or high level of fear-guilt (IE = 0.02; 90% CI = −0.065 to 0.132), the indirect effect was insignificant.

Simple moderation analysis was performed in order to understand how the relationship between religious comfort and hope changes at different levels of fear-guilt. A significant relationship between religious comfort and hope was observed in patients who reported low fear-guilt scores (*B* = 0.50, *t* = 3.72, *P* = .001). In patients who reported moderate (*B* = 0.20, *t* = 1.67, .099) or high (*B* = −0.15, *t* = 0.62, .527) levels of fear-guilt, these relationships were not significant. Thus, we can conclude that at low level of fear-guilt religious comfort was associated with stronger hope than at moderate or high levels of fear-guilt (Figure 2).

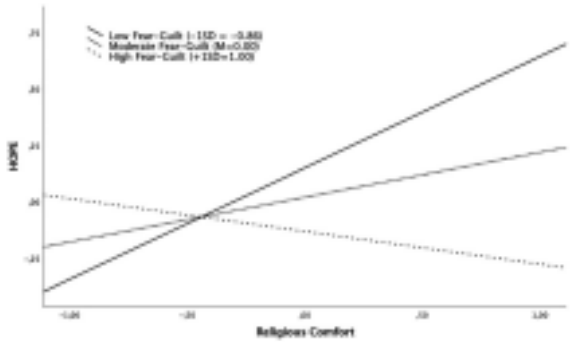

FIGURE 2 A visual representation of the moderation of the effect of religious comfort on hope at low (−1SD), moderate (M), and high (+1SD) levels of fear-guilt

As IMMs suggested, negative emotions toward God and negative social interactions surrounding religion did not moderate the indirect effect of religious comfort on anxiety through hope. The effect sizes of religious comfort on anxiety as mediated by hope at different levels of NEG and NSIR were very small (.05 or less), which allows us to conclude that the probability of making a Type II error was also very small.

4 | DISCUSSION

Our research aimed to analyze the relationship between religious comfort and anxiety in women diagnosed with cancer. Specifically, it aimed to examine hope as a mediator through which religious comfort influences anxiety. We also hypothesized that this religious comfort-hope-anxiety effect would be stronger among patients experiencing fewer religious struggles.

Patients diagnosed with cancer and admitted to the inpatient oncology department participated in the study. For the sample as a whole, the

mean scores for struggles were low in comparison with the potential range for struggles and medium or high in comparison with the potential ranges for comfort and hope (Table 1). This result is consistent with the tendencies observed in other groups and in the Polish population.[31,34]

We found negative correlations between religious comfort and anxiety. This was in line with both our expectations and the results of many studies supporting the protective role of religion in the context of cancer.[4,5] Moreover, there was a relationship between hope and anxiety, indicating that the ability to find pathways to desired goals and to motivate an individual to use those pathways lowers anxiety levels in patients with cancer. Ilaljani et al[24] interpreted this result in terms of hope being a powerful adjustment mechanism in chronic patients such as cancer sufferers, so that hopeful people are better able to cope with their predicament and find the motivation necessary for recovery. However, religion does not always bring comfort. The results confirmed a positive pattern of correlations between religious struggle and anxiety. Religious struggle, although uncommon, has harmful effects. This finding is consistent with other research on religious struggles.[7]

That religion can be a source of support and religion-related difficulties a source of stress is well established. However, the mechanisms by which religion influences health and well-being have not been studied to the same extent. We included hope as a mediator of the relationship between religious comfort and anxiety. On the one hand, this prediction was based on knowledge of religious doctrine, which stresses that religion is a source of hope. On the other hand, empirical research has suggested that hope determines perceptions of cancer and supports the healing process.[9,10,35,36] Our mediation analysis results showed that hope was a mediator in the relationship between religious comfort and anxiety, suggesting that support derived from faith reduces anxiety because it gives hope to these cancer patients. In other words, religiosity is a mental resource that provides a framework for interpreting the disease and offers hope, which is a huge motivational force in dealing with cancer. Hope makes it possible to perceive situations relating to the disease as being possible to resolve, which is why it reduces anxiety.[37] According to Snyder,[10] hope can stimulate the individuals to undertake concrete action. In this sense, hope is linked with religion, which can also provide beliefs that lead to more benign interpretations of situations and help people face highly stressful or traumatic situations. Our result concurs with data suggesting that certain mental resources, hope among them, are linked to religiosity and play an important role in coping with difficult life situations.[38,39]

According to our best knowledge, moderated mediation using hope and struggle has not been studied and yet people suffering from cancer are no strangers to experiencing ambivalence toward their faith. This may be especially prevalent among women, who are characterized by higher levels of religious sensitivity and emotions relating to the sacred.[40] Our research supports this assumption, showing that a high level of religious fear-guilt blocks the effect of religious support on hope, and consequently religiosity fails to fulfil its function in reducing anxiety. In other words, fear-guilt, which reflects preoccupation with own sin and guilt, makes it difficult for people with cancer to use religious resources. This result is particularly interesting because it

shows not only that religious struggle impairs health, as demonstrated by previous research[7,19,20] but also that feelings of religious guilt can prevent the use of religious resources by women with cancer. One potential explanation may be that awareness of religious transgressions and inadequacies related to a sense of guilt can act as a buffer against using religious coping strategies, as doing so could generate the cognitive dissonance of being "a hypocrite" towards God. In order to reduce such dissonance, women with a high level of fear-guilt will avoid using religious resources when thinking about their illness. Another explanation is that religious people could treat the illness as God's punishment for their trespasses. As a consequence, they feel unworthy and undeserving of asking for God's support.

5 | CONCLUSIONS

This was a cross-sectional study, in which the relationship of religious comfort, struggle and hope with anxiety was examined in women with cancer. Religion appears to protect against developing anxiety because it enhances hope. However, religious guilt can stop cancer patients from using their religion as a source of support.

5.1 | Study limitations

The current study has several limitations. First, the participants constituted a convenience rather than randomly chosen sample. Future studies should consider stratified random sampling. Second, over half of the people approached declined to participate in the study, mainly due to difficult medical conditions: patients undergoing chemotherapy or radiotherapy treatment, which caused severe symptoms such as nausea, negative mood, and weakness for many of them. Because the analysis was carried out on a relatively small sample, a significant result was associated with a very small effect size, which limits its practical application. Third, although participation in the study was voluntary, participants may have responded to the religious struggle questionnaire disproportionately because of their high level of distress caused by cancer. Fourth, the cross-sectional designs even in theoretically or empirically derived models are not inherently causal models and, as a consequence, can be reversed and reinterpreted. However, this study also has its strengths: the use of validating measures and testing a complex model of the relationships among important religion-related factors associated with emotional well-being.

5.2 | Clinical implications

On the basis of these results, it is suggested that medical staff use hope in clinical interventions. Assessing and considering the patients' religious resources can be precious in saving hope.[40] Sometimes, however, especially when a religious sense of guilt or unforgiveness by God stops cancer patients from using their religious resources, it is necessary to help resolve this guilt to restore the function of religion that strengthens hope.

DATA AVAILABILITY STATEMENT

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

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Lampiran 3 : Curriculum Vitae

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