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The Definition of Whole Person Care in General Practice: A Systematic Review

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ABSTRACT

Objectives: The importance of "whole person" or "holistic" care is widely recognised, particularly with an increasing prevalence of chronic multimorbidity internationally. This approach to care is a defining feature of general practice. However, its precise meaning remains ambiguous. We aimed to determine how the term "whole person" care is understood by General Practitioners, and whether it is synonymous with "[w]holistic" and "biopsychosocial" care.

Design: Systematic literature review

Methods: MEDLINE, PubMed, EMBASE, CINAHL, PsycINFO, Web of Science, Proquest Dissertations and Theses, Science.gov (Health and Medicine database), Google Scholar, and included studies' reference lists were searched with an unlimited date range. Systematic or literature reviews, original research, theoretical articles, or books/book chapters; specific to general practice; relevant to the research question; and published in English were included. Included literature was critically appraised, and data was extracted and analysed using thematic synthesis.

Results: Fifty publications were included from 4297 non-duplicate records retrieved. Six themes were identified: A multidimensional, integrated approach; the importance of the therapeutic relationship; acknowledging doctors' humanity; recognising patients' individual personhood; viewing health as more than absence of disease; and employing a range of treatment modalities. Whole person, biopsychosocial, and holistic terminology were often used interchangeably, but were not synonymous.

Conclusions: Whole person, holistic and biopsychosocial terminology are primarily characterised by a multidimensional approach to care, and incorporate additional elements described above. Whole person care probably represents the closest representation of the basis for general practice. Health systems aiming to provide whole person care need to address the challenge of integrating the care of other health professionals, while maintaining the patient-doctor relationship central to the themes identified. Further research is required to clarify the representativeness of the findings, and the relative importance GPs' assign to each theme.

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STRENGTHS AND LIMITATIONS OF THIS STUDY

- To the best of our knowledge, this is the first study to systematically review general practitioners' understandings of 'whole person', 'holistic' and 'biopsychosocial' care and the relationships between these terms.

- The exhaustive search strategy used in this review, inclusion of a broad range of literature types, and large number of included studies originating from multiple countries, provides confidence that our results present a comprehensive summary of the understanding of whole person care in academic general practice literature.

- The majority of included publications were theoretical pieces rather than research studies, and therefore further primary research is required to establish the representativeness of our findings.

- There was considerable heterogeneity in included publications, and it is possible that other researchers may identify different themes from the same data.

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INTRODUCTION

Societies worldwide are currently facing an increasing prevalence of patients with chronic multimorbidity. Provision of "whole person care" (WPC) is particularly important in meeting the needs of these patients, and has been an objective of recent health care reforms in several nations.[1-3]

General Practitioners (GPs) are particularly well placed to provide WPC.* A whole person or holistic approach characterises the self-definition of general practice, with its importance recognised by GPs from diverse cultural contexts and by patients.[4-10] Historically, attention to WPC in Western medicine developed in critique of the biomedical model's reductionist framework.[11 12] In 1977, Engel proposed the "biopsychosocial" model, a paradigm shift that recognised psychological and social along with biological contributors to disease.[13] The terms "holistic" and "whole person" care have been used to denote a similar approach.[14-16]

However, a series on the research agenda for general practice in Europe identified that despite the "*implicit consensus about [the importance of an holistic approach] as an essential element for GP,*"[17] this lacked a clear practical definition, and little research had been conducted in the area. Indeed, "*many different definitions of holism, and holistic, are being used in health and the healthcare literature, and no one is quite sure what anyone else means when they use these terms.*"[18] While the terms "whole person", "[w]holistic," and "biopsychosocial" care are sometimes used interchangeably, it is unclear whether they are synonymous, with differences between definitions proposed by general practice organisations.[4 7 9] Additionally, it has been suggested that a commitment to WPC in general practice may be more rhetorical than practical.[11 19] While studies have previously defined "holistic care," "wholistic health care," and "holistic practice," these have either focussed primarily on the context of nursing, or been conducted in a limited geographical location, and it is unclear whether their findings are transferrable to the general practice context.[20-23] In order to evaluate the current concept of WPC within general practice and to design health system practices to provide WPC in a changing health climate effectively, it is first necessary to clarify how this term is defined. We conducted a systematic literature review and thematic analysis aiming to define how the term WPC is understood in general practice and whether it is synonymous with [w]holistic and biopsychosocial care.

METHODS

Protocol and Registration

We prospectively registered a study protocol on the International Prospective Register of Systematic Reviews (PROSPERO) database (registration number CRD42017058824). This is available at https://www.crd.york.ac.uk/PROSPERO/display_record.php?RecordID=58824

Search Strategy

We searched the MEDLINE, PubMed, EMBASE, CINAHL, PsycINFO and Web of Science databases for published literature, and Proquest Dissertations and Theses, Science.gov (Health and Medicine database), and Google Scholar for grey literature, to April 2017. Results from Science.gov were limited to the "top results" reported (maximum 500) and Google Scholar searches to the first 50 hits for each search string. We hand searched the reference lists of included studies.

We developed search terms iteratively, then performed a pre-planned search. The final strategy combined search terms for holistic, whole person or biopsychosocial with terms for general practice. The MEDLINE search strategy is shown in table 1, and was modified for other databases. Shorter search strings combining key search terms were used for Science.gov and Google Scholar due to functional limitations.

Inclusion criteria: Peer reviewed systematic or literature reviews, original research (qualitative studies, quantitative studies with findings expressed as descriptive statements for inclusion in qualitative analysis), theoretical articles, or books/book chapters; literature specific to general practice (studies with a majority of GP or GP registrar participants or separate reporting of their views; text/opinion authored exclusively by GPs or GP registrars, or with at least one GP/GP registrar author and a focus on the general practice context); relevance to the research question (included descriptions, definitions or theoretical models of the terms "whole person," "holistic," or "biopsychosocial" (care/medicine etc.)); and published in English.

Exclusion criteria: Non-English articles; articles not specific to general practice; literature authored by general practice professional organisations. The latter was excluded to achieve an understanding of WPC within academic general practice literature, which was likely to be the basis of such literature.

All eligible citations were uploaded into Endnote X8 and duplicates removed. Two independent reviewers (HT and JR) screened titles and abstracts. Studies that did not meet inclusion criteria were excluded, with disagreements resolved by discussion. A single reviewer (HT) assessed full text of remaining literature against inclusion criteria. Studies that this reviewer considered borderline or suitable for inclusion were reviewed by at least one other author (GM and/or MB), with disagreements resolved by discussion.[1]

*Note: The term general practice/general practitioner is used to incorporate both general and family practice throughout this report.

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Table 1: Medline Search Strategy

((whole N5 person) OR whole-person OR (whole N5 patient) OR whole-patient OR wholistic OR wholism OR holism OR (holistic N5 medicine) OR (holistic N5 care) OR (holistic N5 view) OR (holistic N5 approach) OR (holistic N5 model) OR biopsychosocial OR bio-psycho-social OR bio-psychosocial OR biopsycho-social OR biopsychosociospiritual OR bio-psycho-socio-spiritual OR (MH holistic health) OR person-focused OR ("person focused")) AND (("general practi*") OR ("family doctor") OR ("family physician") OR ("family medicine") OR "generalist" OR (MH general practice) OR (MH general practitioners) OR (MH family practice) OR ("primary care") OR ("primary health care") OR (MH primary health care) OR ("primary health*") OR ("family practi*"))

Quality Appraisal

Qualitative studies were critically appraised using Kmet et al's Standard Quality Assessment Criteria.[24] An additional question, "Have ethical issues been taken into consideration?" was added, to give a total possible score of 22. Book chapters and opinion pieces were appraised using JBI's Critical Appraisal Checklist for Text and Opinion.[25] Initially, two reviewers (HT and MB) independently appraised five pieces of literature with disagreements resolved by discussion. Subsequent quality assessment was performed by a single reviewer (HT). No studies were excluded due to quality.

Data Extraction

Details including author, year, country, type of literature, population focus (for qualitative studies), key term (holistic, whole person, biopsychosocial), and descriptions of key terms were extracted by two reviewers (HT and MB) for an initial five pieces of literature and consensus was achieved. A single reviewer (HT) extracted data from remaining literature.

Data Analysis

Full text of included studies was uploaded into NVivo 11. Original data relevant to the research question (including relevant results and original statements in discussion of qualitative studies, and original statements in books and theoretical pieces) were thematically coded. Two independent reviewers (HT and MB) performed coding inductively on an initial sample of five pieces of literature to search for concepts, with disagreements resolved by discussion. Following this, a single reviewer (HT) coded other literature. Subsequent studies were coded into pre-existing concepts, and new concepts were created when deemed necessary.

Thematic synthesis was performed by a single reviewer (HT) and discussed with another two reviewers (GM and MB) for consensus.[26] The terms "whole person," "holistic," and "biopsychosocial" were then compared by exploring similarities and differences between the themes represented within each term, assisted by NVivo query functions. It was identified during analysis that variations of "holistic" terminology (eg. holistic care, medicine, etc.) may have different connotations, and these were subsequently compared. Temporal and geographic variations in usage were found to be absent.

Patient and Public Involvement

This research was done without patient involvement, due to its primary focus being on the understanding of WPC among GPs, and its nature as a systematic review. As such, no ethical review was required.

RESULTS

Searches retrieved 4297 non-duplicate publications. Following title/abstract screen, 587 publications were selected for full text retrieval. We were unable to access eight of these despite conducting a library search. Of the remaining publications, fifty met inclusion criteria (figure 1). These originated from 13 countries, and comprised 5 qualitative studies, 40 theoretical articles, 4 book chapters, and 1 thesis. The primary terms of interest were "holistic" in 24 sources, "whole person" in 9 sources, "biopsychosocial" in 14 sources, both whole person/holistic in 2 sources, and both whole person/biopsychosocial in 1 source. None of the papers using whole person and only one paper using biopsychosocial terminology specifically aimed to define these terms, whereas multiple papers specifically defined holistic terminology.[16 18 22 27-33] The characteristics of included literature are shown in Appendix 1. We believe theoretical saturation was reached.

Thematic Synthesis

There was substantial heterogeneity in the literature. However, six overarching themes were identified, each with between one and four subthemes. These are shown in table 2 and discussed below. Few sources specifically drew a distinction between whole person, holistic, and biopsychosocial terminology, with several using these terms interchangeably.[29 31-38] However, on overall analysis we identified differences in emphasis, as discussed below and illustrated in figure 2. Sub-themes that are relevant to more than one of the three terms overlap in the diagram.

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Table 2: Themes and Subthemes

Theme	Subthemes	Terms Characterised by This Theme
Employs a multidimensional, integrated approach	-Considers multiple aspects of the person and their context -Integrates these aspects such that the whole is seen as greater than the sum of the parts	Biopsychosocial (multidimensional +/- integrated) Whole person Holistic
Importance of the therapeutic relationship	-Values the therapeutic relationship -Places importance upon personal attributes of the doctor that foster the therapeutic relationship -Employs a collaborative approach that emphasises patient responsibility -Values continuity of care	Biopsychosocial (variable) Whole person Holistic
Acknowledges the humanity of the doctor	-Places importance upon doctor self-awareness -Adopts a "physician heal thyself" philosophy -Identifies potential for personal growth of the doctor through treating the patient	Biopsychosocial (self-awareness) Whole person Holistic
Recognises the individual personhood of each patient	-Views patients as individual, unique persons -Focuses on the person rather than on the disease -Distinguishes between disease (a pathological derangement) and illness (a broader term encompassing the effect of disease on the patient's life)	Biopsychosocial (minor theme) Whole person Holistic
Health as more than absence of disease	-Health is viewed as more than the absence of disease -Disease is viewed as a state of imbalance and healing as restoring the balance of health -Emphasises preventive health measures	Biopsychosocial (minor theme) Whole person (minor theme) Holistic
Employs a range of treatment modalities	-Use of a range of treatment modalities -May include (but is not synonymous with) CAM	Biopsychosocial Whole person Holistic (specific focus on CAM)

1. A Multidimensional, Integrated Approach

Employing a multidimensional, integrated approach, rather than a biomedical reductionist model, was the dominant theme throughout the literature.

The literature emphasised that biopsychosocial, holistic and whole person approaches must address multiple aspects of the person and their context, rather than being strictly biomedical.[16 18 22 27 31 33 34 36 39-54] In a paper discussing the definition of holism, Freeman stated that:

"*An approach to health and medicine that is not reductionist is an implicit part of the comprehensive care provided by GPs. We are not doctors for particular diseases, or particular organs, or particular stages in the life cycle — we are doctors for people.*"[18]

Similarly, in a study on the perceived meaning of a (w)holistic view among GPs and district nurses in Sweden, Stranderg et al found that:

"*Biomedical attitude is not enough. There is a need for a multidimensional viewpoint including a bio-psychosocial attitude towards the patients.*"[22]

Which important aspects of the "whole" to include in care varied. Biological, psychological and social factors were commonly identified.[12 14 16 18 22 27 29 32 33 36 39-43 45-47 49 51 53-56] Some GPs argued for the importance of additional factors. Spirituality was prominent among these.[14 29 33 34 37 39 40 42 44 48 50 54 57 58] Murray et al concluded from their study on GPs' views on their role in providing spiritual care that:

"*The whole-person approach to medicine may be incomplete if it lacks consideration of the spiritual dimension.*"[37]

The patient's ecological/environmental context was also emphasised by some GPs.[14 59]

The literature also emphasised that aspects of the person must be viewed in an integrated fashion.[16 18 27-29 31-33 36 39 40 42-47 52 53 55 56 58 60] In their study on the meaning of an (w)holistic view, Stradberg et al found that:

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"*The participants discussed the concepts 'the whole' versus 'parts of the whole'. Many meant that the whole actually is greater than the sum of all the parts…*"[22]

Similarly, Pietroni stated that a key principle of holistic medicine is that:

"*The human organism is a multidimensional being, possessing body, mind and spirit, all inextricably connected, each part affecting the and whole and the whole being greater than the sum of the parts.*"[29]

Sturmberg identified "*understanding the interconnectedness of various illness aspects*"[53] as the second step in an approach to teaching holistic care.

One exception to this emphasis upon a multidimensional, integrated approach was identified in O'Brien et al's study. GPs in one practice in this study understood holism as caring for a patient's multiple comorbidities, and placed boundaries between "the medical" and "the social."[38]

Employing a multidimensional, integrated approach to care was the key theme characterising each of the biopsychosocial, holistic, and whole person terminologies.[16 18 22 27 29 31-34 36 39-56]

Biopsychosocial terminology was the most specific of the terms in defining the aspects of care that it addressed (biological, psychological, social).[36 41 43 46] Some GPs suggested the biopsychosocial approach was too narrow, and should be expanded to a "biopsychosociospiritual,"[34 39] "ecobiopsychosocial,"[59] or "psychosomatosociosemiotic" model.[53 61] Occasionally the term biopsychosocial was used to incorporate these broader aspects.[33] There was some debate regarding whether the biopsychosocial model employed an integrated approach, with some arguing that it remained dualistic.[49 55]

Whole person and holistic terminology were less specific than biopsychosocial in defining their domains of care, encompassing a varied and broad range of biological, psychological, social, spiritual, and environmental/ecological aspects.[16 18 27 34 39 40 42 44 47 48 51 54] Some models of WPC specifically distinguished between care of the person (body, soul, spirit) and external factors (social, environmental).[39 47] However, these still addressed external factors in their overall approach to care. Emphasis upon an integrated approach was strongest in holistic terminology, and also present in whole person terminology.[16 18 27-29 31 32 39 40 44 45 52 53 55 56 58]

2. Importance of the Therapeutic Relationship

The importance of the therapeutic relationship, a collaborative approach, and characteristics of the doctor that fostered this relationship was emphasised.[12 14 16 22 27-30 32 33 35 38 39 42 43 45 46 48 50 52 54 55 57 62-66]

The therapeutic doctor-patient relationship was valued.[12 28 29 50] Risdon stated that:

"*True healing and mending of brokenness is possible only within an authentic human relationship.*"[50]

Similarly, McWhinney argued that:

"*There is a growing body of scientific evidence that human relationships are an important factor in the favorable outcome of illness. Thus we have support for the ancient belief in the healing power of the physician.*"[28]

O'Brien et al included relationship as a suggested component in a whole person intervention.[38] One GP in their study:

"*describ[ed] how she felt the essence of the GP (relationship, intuition, support and continuity) had been lost with the medical nuts & bolts of monitoring…, a view supported by her colleagues.*"

Personal qualities of the doctor that fostered the therapeutic relationship were emphasised.[18 27 29 32 38 39 46 52 55 57 60 62 64 66 67] These included characteristics such as being fully present, attentive to and interested in the patient, supportive (compassionate, empathetic, respectful, non-judgemental etc.), and possessing knowledge and understanding of the patient in addition to technical competence. Participants in Strandberg's study identified that an important component of a holistic view was:

"*finding the patient's hidden agenda and listening to what the patient is actually saying.*"[22]

Multiple sources emphasised a collaborative approach, with patients taking responsibility for their health.[14 16 27 29 30 33 38 43 45 46 48 50] Van Velden expressed this succinctly, stating that:

"*[in the] holistic bio-psycho-social model…the doctor-patient relationship changes from one of monologue to one of dialogue, with the doctor no longer instructing the patient but rather involved in negotiating with the latter. People start taking responsibility for personal choices rather than deferring to the rules of institutions.*"[33]

Illness may be viewed as an opportunity for personal growth. Borins stated that:

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"*sometimes illness can be a creative opportunity for the patient to learn more about himself and the direction he is taking…Sometimes physical or emotional pain can inform a person that he must change his life and grow.*"[14]

Finally, some sources identified continuity as an important aspect of the doctor-patient relationship.[22 42 54 63] One author specifically distinguished between holistic and WPC on the basis that continuity was a feature of whole person but not of holistic care.[54] However, this distinction was not found elsewhere in the literature.

Emphasis upon the doctor-patient relationship was prominent within whole person and holistic literature.[14 16 27 29 30 32 35 38 39 42 45 48 50 52 54 55 57 63 64 66] Literature on the biopsychosocial approach was mixed, with the doctor-patient relationship emphasised in papers that specifically focussed on the practical application of a biopsychosocial approach.[46 62 67] An alternative view also existed, that considered the biopsychosocial model an ethically neutral scientific theory rather than an approach to care.[41]

3. Acknowledges the Humanity of the Doctor

The literature placed importance upon acknowledgment of the doctor's humanity. This encompasses self-awareness, a "physician heal thyself" philosophy, and the potential for personal growth of the doctor through the clinical interaction.[12 14 16 29 31 32 39 42 44 48 58 62 65-67]

Several sources argued for the importance of doctors' self-awareness.[12 32 50 62 65 67] Stewart stated that:

"*holistic care implied a set of values as well as behaviours on the part of the physician; this set would include…awareness of his own person...*"[32]

Epstein also implied the importance of self-reflection when discussing how to apply the biopsychosocial vision, suggesting that doctors ask themselves:

"'*What parts of your self are you engaging in the care of this patient, right now?' and then, 'Does it have to be that way?*'"[62]

A "physician heal thyself" philosophy was emphasised[14 16 29 31 39 42 44 48 58] Brown stated that:

"*Holistic care means practitioners matter too. We need to look after ourselves, not only to be an example to our patients, but for our own well-being and that of our families.*"[42]

Similarly, Borins stated that:

"*An important concept of holistic medicine is that of 'Physician, heal thyself'. The more complete we are in our own spiritual, psychological and physical development, the easier it will be to help someone else on the path of positive growth.*"[14]

A minor subtheme is the potential for personal growth of the doctor through treating the patient.[12 39 66] In reference to spiritual care, Anandarajah stated that:

"*physicians have the potential to heal and be healed through their clinical interactions, as clearly illustrated by numerous physician stories.*"[39]

Sawa stated that:

"*The practice of whole-person medicine increases the practitioner's personal growth and develops his or her analytic skill and ability to think in terms of a complex web of contributing factors, rather than in terms of single chains of causal relationships.*"[66]

Recognising doctors' humanity is a feature of biopsychosocial, holistic and whole person terminology, however the specific subthemes represented in these terminologies differed. Doctors' self-awareness featured in literature describing all three terms.[12 32 50 62 65 67] A "physician heal thyself" philosophy primarily characterised holistic, and to a lesser extent WPC.[14 16 29 31 39 42 44 48 58] Potential for personal growth of the doctor was a minor theme of some sources on holistic and WPC.[12 39 66]

4. Recognises the Individual Personhood of Each Patient

Recognition of the unique personhood of each patient within their individual context also characterised the literature.[28 42 44 50 55 60] McWhinney stated that:

"*Understanding and treating illness in its context is what holistic medicine means to me…The natural [holistic] diagnostician tends to notice what is unique in each patient. He is reluctant to classify and label, and he does not separate the disease from the man or the man from his environment.*"[28]

Focus was placed upon the person rather than the disease.[14 27 31 33 38] In a study exploring how GPs who practised complementary therapies understood the term "holism" Adams identified that they viewed:

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"*holism in terms of treating a person rather than simply a patient. These doctors suggest that treating an individual as a patient leads to 'unhealthy' focus upon disease and a failure to acknowledge what they see as the complex and multilayered nature of illness.*"[27]

Some papers distinguished between disease and illness.[22 27 50] Strandberg's study identified that to have a holistic view:

"*GPs and nurses have to deal with the gap between 'illness' and 'disease', i.e. what the patient experiences and what is the medical problem.*"[22]

Recognising patients' individual personhood primarily characterised whole person and holistic terminology.[22 27 28 31 38 40 42 44 50 55] Variations on this theme were occasionally present in biopsychosocial literature.[33 60]

5. Health as More than Absence of Disease

Papers incorporating this theme viewed health as more than absence of disease.[33 40] Van Velden stated that:

"*Optimal health is therefore much more than the absence of disease or infirmity. It is the conscious pursuit of the highest qualities of the spiritual, mental, emotional, physical, environmental, occupational and social aspects of the human experience, as illustrated in the bio-psycho-social model.*"[33]

Some sources conceptualised disease as a state of "imbalance" and healing as restoring the balance of health.[29 33 53 66] Pietroni, for example, stated that:

"*Disease or ill-health arises as a result of a state of imbalance, either from within the human being or because of some external force in the environment…*"[29].

Preventive health measures were also emphasised.[14 31 32 35 40 52 63]

Aspects of this theme were included in whole person, holistic, and biopsychosocial care.[14 29 31-33 35 40 52 53 63 66] However, it was most pronounced in the holistic literature.[14 29 31 32 40 52 53 63]

6. Employs a Range of Treatment Modalities

Utilising a wide range of treatment modalities was the final theme identified.[14 16 18 27 31 33 39 48 53 58]

Examples include Anandarajah's suggestion of treatment modalities in her body, mind, spirit, environment, social, transcendent (BMSEST) model of WPC.[39] These ranged from medication, surgery and physical therapy, to counselling and cognitive therapy, spiritual counselling, compassion, presence, and connection. Margalit's study on the practical application of the biopsychosocial model identified that offering not only medication, but also advice on health promotion and managing emotions characterised a biopsychosocial doctor-patient encounter.[46]

A subset of literature using holistic terminology specifically included the use of complementary and alternative medicine (CAM).[18 27 29 31 34 40 48 58] Pietroni stated that:

"*An holistic approach…involves a willingness to use a wide range of interventions – traditional medical interventions, alternative approaches and self-help measures.*"[48]

However, the literature consistently emphasised that CAM is not holistic if used in isolation.[14 16 18 22 27-31 35 48] Pietroni stated that:

"*Holism is more than a pot-pourri of therapies. It is an approach to health and disease that transcends any particular therapy…Holism should not be confused with the positive-health movement nor with the complementary medicine movement. Many complementary practitioners do not have an holistic approach and use their therapies in the traditional reductive manner. Conversely, many doctors who know nothing of homeopathy or acupuncture adopt a whole-person approach to their work and have done even before the word holistic became current.*"[30]

Similarly, in his study on GPs who practise complementary therapies, Adams found that:

"*Many of the GPs are keen to stress that a holistic approach does not evolve simply with their development of complementary practice. They talk of always having been holistic and how holism is not confined to complementary medicines.*"[27]

Additionally, McWhinney wrote that:

"*There is nothing unorthodox about holistic medicine. Unfortunately, the term has been used so much by unorthodox groups of healers, that it is in danger of losing some of its meaning for us. I do not wish to suggest that we should ignore the contribution*

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which unorthodox methods can make to healing. Let us remember, however, that the holistic approach has a long and distinguished history in orthodox medicine itself."[28]

The use of a wide range of treatment modalities characterised whole person, holistic, and biopsychosocial care.[14 16 18 27 31 33 39 48 53 58] However, the inclusion of CAM was a specific characteristic of holistic terminology.[18 27 29 31 34 40 48 58] A distinction was found between various "holistic" terms in this respect. Sources that discussed "holistic *medicine*" or "holistic *health*" frequently incorporated CAM, with the exception of McWhinney's paper describing holistic medicine.[14 16 27-29 31 58] Conversely, sources discussing "holistic *care*" rarely referred to the use of CAM. This suggests that the term "holistic care" does not necessarily imply incorporation of complementary approaches within the GP context. The terms holism, "holistic approach" and "holistic view" were more varied in this respect, making these terms somewhat more ambiguous.[18 27 28 30 34 36 38 48 55 63]

Specific Distinctions Between Whole Person, Holistic and Biopsychosocial Terms

Whole person, holistic, and biopsychosocial terminology were used interchangeably in several papers.[29 31-38] Some papers did specifically differentiate these terms, but with no consistency among the literature.[29 35 54 55 63 66] Davidsen implied that the biopsychosocial approach is not holistic due to a lack of integration between the components it addresses.[55] Grantham differentiated the biopsychosocial approach from holistic medicine, arguing that the latter implied inclusion of CAM.[35] Howie argued that the biopsychosocial approach comprised patient-centeredness in addition to holism.[63] Sawa differentiated between whole person medicine and biopsychosocial theory by the inclusion of systems theory in the latter.[66] Wun distinguished between whole person care and holistic care by an additional element of continuity of care in the former, stating that:

"*Whole person care is the accumulation of many incidences of holistic care throughout the lifetime.*"[54]

Pietroni made a different distinction between these terms, arguing that holistic care includes:

"*more recent scientific discoveries' (such as psychoneuroimmunology, physics and field forces) in addition to whole person medicine.*"[29]

On overall analysis of the literature, however, representation of themes discussed above differed between the terms, as illustrated in figure 2.

"Technoscientific Holism"

One alternative description of holism in the literature was "technoscientific holism" described by Vogt.[68 69] Vogt analysed whether P4 systems theory, a "*predictive, preventive, personalised and participatory*" approach to medicine, was holistic. In doing so, he specifically differentiated between the "technoscientific holism" of systems theory, and an approach more similar to that described above, which he refers to as the "holism of humanistic medicine".[68] He describes "technoscientific holism" as:

"*resulting from an altered, more all-encompassing technological gaze on human life and related changes in biomedicine's methods and philosophy", in which "the whole continuum of health and disease states…is defined as potentially quantifiable, predictable and* actionable"[68] (author's emphasis).

This concept is unique in the included literature.

DISCUSSION

Our analysis suggests that GPs understand WPC to be an approach that considers multiple dimensions of the patient and their context, including biological, psychological, social, and possibly spiritual and ecological factors, and addresses these in an integrated fashion that keeps sight of the whole. It employs a range of treatment modalities to achieve this aim. Additionally, it emphasises the therapeutic value of the doctor-patient relationship, characterised by an attentive, supportive, and collaborative approach. Additional less pervasive features of WPC included recognition of the doctor's humanity, comprising self-awareness and attending to their personal health, and adopting a view of health as more than absence of disease. While few sources drew a distinction between whole person, holistic, and biopsychosocial terminology, and several used these terms interchangeably, on overall analysis the terms differed in their emphasis. Their unifying feature was a multidimensional approach to care, in contrast to pure biological reductionism. However, biopsychosocial care was overall described more narrowly than WPC, with clearer definition of the domains of care addressed (biological, psychological, social), while holistic terminology was somewhat broader than WPC, with greater focus on health as wholeness, and at times specific inclusion of CAM. The term "holistic care" was more similar to WPC than "holistic medicine" or "holistic health", particularly with respect to the inclusion of CAM in the latter terms. Our findings enable clearer communication through selection of the term most appropriate to the context under discussion.

Our findings were similar to those of previous concept analyses that aimed to define "holistic" care without a specific focus on general practice, which consisted of mostly nursing-focussed literature.[20 21 23] One difference was that these did not specifically emphasise acknowledging the humanity of the practitioner, though they did mention the importance of self-awareness. Our findings are also similar to definitions of whole person or holistic care provided by general practice professional organisations, supporting our reasoning that they were derived from the literature. Several shared an emphasis on a multidimensional approach

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to care.[4 7 9] Consistent with our findings, their definitions vary in the explicit inclusion of spiritual/existential, cultural and ecological dimensions in a whole person/holistic approach. The Royal College of General Practitioners' definition incorporates an additional focus on the importance of transitioning from a diagnostic/curative to a palliative/supportive role when appropriate.[9] In view of our findings, organisations with narrower definitions of holistic/WPC may wish to explore whether the GPs they represent consider the additional characteristics identified in our study to be important features of this care, and consider expanding their definitions if this is the case.

There was heterogeneity in included literature, and one theory that may explain this has been suggested by Vanderpool.[70] He suggested that holistic terminology is used in four distinct ways, which have evolved from four approaches to medicine: biopsychosocial, whole person, "high level healthiness," and "unconventional and esoteric diagnosis and healing". His descriptions of biopsychosocial and whole person approaches are similar to those identified in this review, with a greater focus on interpersonal elements in whole person than biopsychosocial care. If his theory is correct, it would explain why "holistic" was the broadest of the terms studied: it is being used to describe biopsychosocial care, whole person care, and additional distinct traditions included in other themes we identified (health as a state of wholeness, CAM). The distinction between usages was not as clear in our study as suggested by Vanderpool's framework; however, this may be due to mixing of usages arising from lack of definitional clarity. In view of this and of our findings, Vanderpool's suggestion that terms that are more specific should be used in preference to "holistic" terminology seems advisable. Where both multidimensional/integrated care and relational elements of care (the doctor-patient relationship, recognising patients' individuality) are in view, we would suggest WPC as the preferred term. If additional themes such as using CAM are in view, we would suggest that this should be stated specifically to avoid confusion.

This raises several practical implications and questions for future research. First, our findings were consistent with previous observations that there is little primary research defining our terms of interest in general practice.[17] Only six pieces of primary research, of variable quality, were identified.[22 27 32 37 38 46] Opinion pieces may have reflected the views of GPs with a strong interest in biopsychosocial/whole person/holistic care, and primary research is required to determine the relevance of our findings to the broader GP context. Second, due to heterogeneity among included literature, with many pieces only including a selection of identified themes, it remains unclear whether GPs would share consensus that all of these features characterise the terms of interest, what relative weighting should be applied to each, and which aspects of care in addition to biological, psychological, and social factors are included. Previous studies have gone some way to addressing this issue, particularly regarding GPs' role in addressing existential and spiritual factors, however work remains to be done.[71 72] Further research is also required to explore the facilitators, barriers, and outcomes of WPC as described. Our findings also have practical implications in the context of primary health system reforms that aim to provide WPC in response to the increasing prevalence of patients with chronic multimorbidity. They enable GPs to reflect on their individual practice with respect to WPC, and could inform focussed education and refinement of clinical approaches to provide WPC. They also suggest that WPC requires both multidimensionality and integration. Achieving both can be challenging, particularly where multiple providers are involved in care. However, our findings suggest that to provide WPC, this is essential. Proposals for health system redesign have included strategies such as improved communication between providers and integration of health care systems, which go some way toward addressing this issue.[2 3] Our findings suggest that such system changes need to embed an enduring, therapeutic patient-GP relationship, which must not be overlooked in a quest to achieve efficiency and tangible outcomes. Previous health reforms have at times neglected this relational aspect of care.[2 11] Our findings highlight the danger that such an approach may fail to deliver the whole person approach that ideally characterises primary care.

Strengths of this study include its comprehensive search strategy and broad range of literature included, resulting in inclusion of a large number of publications from a broad geographical distribution. As a result, we can be confident that our results represent a comprehensive summary of the understanding of WPC in general practice literature. Limitations of this study include our decision not to include definitions from professional associations representing general practice, as these were considered to have been derived from existing work rather than introducing original concepts. There was considerable heterogeneity in the papers, and it is possible that other researchers may identify different themes from the same data.

CONCLUSION

Within general practice literature, the terms whole person, biopsychosocial, and holistic care share an emphasis upon a multidimensional, integrated approach to care, and also incorporate additional themes which vary among the terms as discussed. These findings can inform GPs self-reflective practice and the design of health systems that foster true WPC. Further research is required to explore the transferability of our findings, together with the facilitators, barriers, and outcomes of WPC as defined.

Contributors: HT, MB and GM conceived and designed the original protocol. Lars Erickson (librarian) assisted HT in developing a search strategy. HT and JR performed the title/abstract screen. HT, MB and GM were involved in screening full text articles, critical appraisal and data analysis. HT wrote the first draft of the manuscript with MB and GM, and all authors contributed to the subsequent drafts. All authors had full access to all data and HT, MB and GM can take responsibility for the integrity of the data and accuracy of data analysis. GM is the guarantor and affirms that the manuscript is an honest, accurate, and transparent account of the study being reported; that no important aspects of the study have been omitted; and that any discrepancies from the study as planned and registered have been explained.

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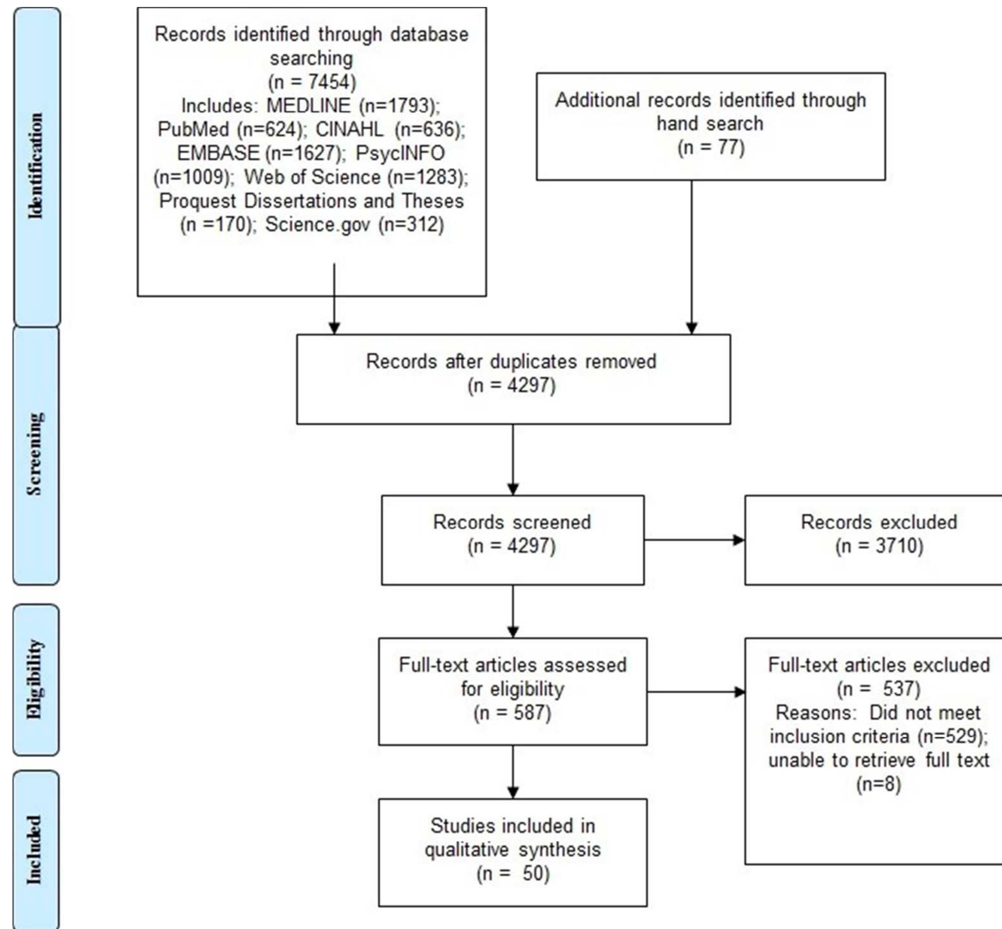

Figure 1: PRISMA Flow Diagram

177x166mm (96 x 96 DPI)

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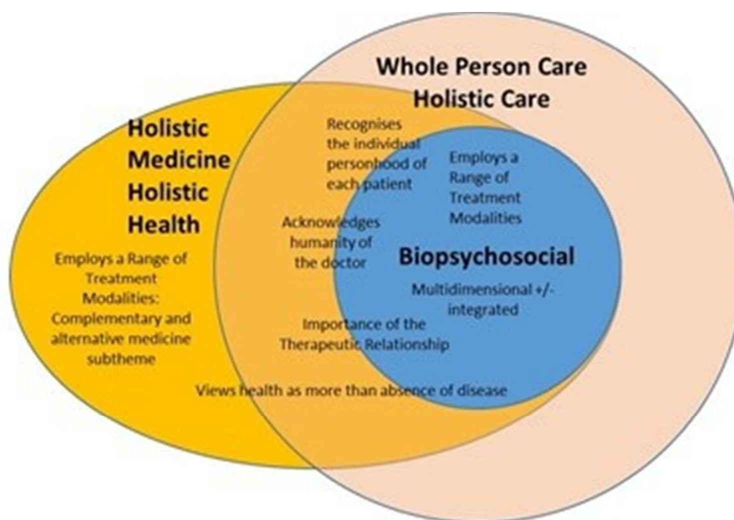

Figure 2: The Interrelationship Between Biopsychosocial, Whole Person and Holistic Terminology
Features of each approach are included within their respective circles in the diagram. Features placed on the circles' boundaries are a minor feature of the inner circle term, but more pronounced in the outer circle/s term.
The diagram illustrates that biopsychosocial was the narrowest but most well defined of the terms, encompassing multidimensional +/- integrated care, and the use of a range of treatment modalities. Minor themes of the biopsychosocial approach include recognising the individual personhood of each patient, and viewing health as more than absence of disease. Some sources that specifically discuss the practical application of the biopsychosocial approach also emphasise the importance of the therapeutic relationship and of acknowledging the humanity of the doctor.
Holistic and whole person terminology were broader than biopsychosocial. These terms included a stronger emphasis on the therapeutic relationship, recognition of the patients' individual personhood and the humanity of the doctor, and a view of health as a state of wholeness and balance than represented in biopsychosocial care. Whole person and holistic care were essentially synonymous. "Holistic medicine"/"holistic health" were related broader terms that sometimes incorporated complementary and alternative medicine.

105x71mm (96 x 96 DPI)

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APPENDIX 1: CHARACTERISTICS OF INCLUDED STUDIES

Author, Year, Country	Literature Type	Study Aim or Theme Addressed	Population Focus	Key Term	Minor Terms	Relevant Definitions	Quality
Adams (2001)[27] England	Qualitative study	"…to examine how rank-and-file GP therapists understand and explain the concept of holism in relation to both their general practice and their integration of complementary therapies therein."	28 GPs on the medical register of the cities of Edinburgh and Glasgow, who were practicing complementary therapies.	Holism	Treating the whole person	Two general understandings of holism among GP therapists: 1. Treating the "whole person" (physical, psychosocial, cultural, environmental). Includes two themes – exploration of personality and immediately observable behaviour of patient; and understanding the patient in their social/environmental context. 2. Enhancing holism: Ability to treat a broad range of problems. States that holism is not confined to complementary practice.	73%
Anandarajah (2008)[39] USA	Theoretical: Opinion piece	Suggests a theoretical framework for spirituality in WPC.	N/A	WPC	Biopsycho-sociospiritual model Holistic approach	Proposes two models, which together describe WPC. 1. Body, mind, spirit, environment, social, transcendent (BMSEST) model. 2. Head, heart, hands (3H) model.	100%
Ben-Ayre, Steinmetz & Ezzo (2013)[34] Israel	Theoretical: Case study	Presents "an integrated biopsychosocial-spiritual" approach to cancer care in context of discussing two case studies.	N/A	Holistic approach	Biopsycho-sociospiritual approach	Argues that "holism in medicine should be based on a [biopsychosocio]-spiritual paradigm, which may be interpreted repeatedly by the dynamics of the patient-physician dialogue."	92%
Borins (1984)[40] Canada	Theoretical: Opinion Piece	Argues that WPC is lost in a culture of subspecialisation, and that as a result people are seeking traditional healers/CAM.	N/A	Holistic medicine		"Holistic medicine approaches the physical, emotional, spiritual, and social aspects of a person as they relate to health and disease. It emphasizes prevention; concern for the environment and the food we eat; patient responsibility; using illness as a creative force to teach people to change; the 'physician, heal thyself' philosophy; and appropriate alternatives to orthodox medicine."	75%
Borins (1980)[14]	Book Chapter	Describes holistic health.	N/A	Holistic health/ medicine		"**Holistic Health** refers to the approach to the whole person. It is a concern for the balance of the physical, psychological, social and spiritual aspects of each person as it relates to health and disease"	50%

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Canada						(author's emphasis). "**Holistic Medicine** attempts to look beyond one-dimensional thinking to the unity of life, which includes seeing the oneness of all being and process, as well as being in harmony with the laws of nature" (author's emphasis).	
Brody (1999)[41] USA	Theoretical: Commentary	A response to a qualitative study on family physician care for native Americans.	N/A	Biopsycho-social model		Discusses that biopsychosocial model involves understanding "the social and cultural environment and the psychological impact that environment has on the individual, just as much as [biological factors]." Differentiates between the biopsychosocial model as a scientific, ethically neutral theory, and patient centred care, which includes ethical aspects and communication.	58%
Brown (2007)[42] England	Theoretical: Guest editorial	Discusses the impact of the 2004 general practice contract in the UK on the provision of the holistic approach of traditional general practice.	N/A	Holistic care		Describes a holistic approach as one "where patients are treated as individuals; mind, body, emotions and spirit and seen as part of a greater whole and includes their family, society and their environment." Also discusses practitioner self-care as a component of holistic care.	58%
Davidsen, Guassora & Reventlow (2016)[55] Denmark	Theoretical: Opinion piece	Discusses theoretical models of understanding patients' undifferentiated symptoms without a sharp body/mind divide.	N/A	Holistic care	Biopsycho-social model	Defines holism as being greater than the sum of the parts, and a holistic approach as relating to "the whole human being and the complexities of his or her cultural and social context." Discusses theoretical models including: -Psychosomatic approach -Biopsychosocial model -Balint's view and patient-centeredness -The body-mind -Bodily empathy -Mentalisation	100%
DeGruy & Etz (2010)[56] USA	Theoretical: Opinion piece	Discusses the integration of behavioural healthcare into the Patient Centred Medical Home.	N/A	WPC		Equates "care of the whole person" with comprehensiveness of care that addresses all healthcare needs by integrating care provided by other team members. Argues that WPC must include the full psychosocial dimension of care (mental healthcare, family, and community contexts, substance abuse, and health behaviour change).	90%
Doherty, Baird &	Theoretical: Opinion piece	"To evaluate the progress of family	N/A	Biopsycho-social model		Argues that the biopsychosocial model is best viewed as a "metatheory." It includes biological, personal, and social components;	83%

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Becker (1987)[43] USA		medicine in incorporating [the]…biopsychosocial model of medicine into its scientific and clinical work.”				as well as wider contexts (larger social and cultural units; doctor-patient relationship within the health care system). Proposes a “split biopsychosocial model.”	
Ellyson (1958)[44] USA	Theoretical: Opinion Piece	Discusses treating the whole patient in general practice.	N/A	Treating the whole patient		Argues that patients must be treated as a whole, including body, mind, and soul (religious aspect). Focuses on “men of medicine” and “men of God” working together to provide care for the whole patient. Discusses the importance of physicians “setting an example of right living.”	58%
Epstein (2014)[62] USA	Theoretical: Opinion piece	“…explore[s] ways in which Engel’s biopsychosocial vision can be realized through building the capacities of clinicians to become more self-aware and resilient, and engage in compassionate action.”	N/A	Biopsycho-social		Lists eight physician behaviours/attitudes that facilitate a biopsychosocial approach: • “From fragmented self to whole self • From othering to engagement • From objectivity to resonance • From detached concern to ‘tenderness and steadiness’ • From self-protection to self-suspension • From focus on well-being to focus on resilience • From empathy to compassion • From whole mind to shared mind”	83%
Epstein & Borrell-Carrio (2005)[67] USA/ Spain	Theoretical: Opinion Piece	Proposes that “habits of mind may be the missing link between a biopsychosocial intent and clinical reality.”	N/A	Biopsycho-social model		Views the biopsychosocial model as “a vision and an approach to practice rather than an empirically verifiable theory, a coherent philosophy, or a clinical method.” Suggests that the biopsychosocial approach should be based upon a matrix/web approach rather than a linear ordering of system levels. Discusses “habits of mind” required for a biopsychosocial approach, including “attentiveness, peripheral vision, curiosity and informed flexibility,” used within appropriate context.	92%
Fortin, Hudon, Bayliss,	Theoretical: Opinion Piece	To “…review the relationship between	N/A	Caring for the whole patient		“Caring for the whole implies considering the entire person behind the symptoms within his or her life context. It also mandates focusing on the patient’s *experience* of the symptoms…finding common ground	83%

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Soubhi & Lapointe (2007)[45] Canada/ USA		psychological distress and multimorbidity… and discuss a team-based approach to managing care for this complex patient population."				with the patient and collaborating on an approach that incorporates the patient's perspective" (author's emphasis).	
Fraser-Darling (1985)[57] England	Theoretical: Reflection on case study	Reflects on a case study in which spiritual care was provided to a patient.	N/A	Holistic Care		Discusses a single element of holistic care: Spiritual care (from a Christian perspective). Describes this as involving empathy (mental, emotional, spiritual); being with the patient; avoiding being judgemental; and avoiding creating inappropriate professional distance.	42%
Freeman (2005)[18] USA	Theoretical: Opinion Piece	Discusses the definition of holism.	N/A	Holism		Briefly reviews the literature on holism, identifying understandings including complementary/alternative medicine, spirituality in health, nursing practice, and biopsychosocial medicine. Argues that "what is 'holistic' depends on where you stand" [ie. it is the largest scale that is relevant to you]. States that the European Academy of Teachers in General Practice/Family Medicine definition of holism ("the ability to use a biopsychosocial model taking into account cultural and existential dimensions") is "quite a good one." Argues that "holism does not mean 'anything outside traditional allopathy'" and that holism is not reductionist or limited to a single therapy.	100%
Freeman & McWhinney (2016)[12] USA	Book chapter	Argues for a paradigm shift in medical thinking from biomedical to a "new paradigm."	N/A	Holistic		A holistic approach to medicine considers it "impossible to consider any illness without reference to the patient's self…[sees] the patient as a whole, an integrated being with a history, a present, and a future that is ensconced in myriad psychological realities, social relationships, and environmental challenges, against a background of genetic propensities."	100%
Grantham (1983)[35] Canada	Theoretical: Opinion Piece	Argues for a role for behavioural medicine as a special interest area in family practice, and its inclusion in	N/A	Whole person medicine Biopsycho-social medicine	(w)holistic medicine	Uses whole person and biopsychosocial medicine as synonyms. Argues that behavioural medicine is an element of these approaches. Argues that holistic medicine is a "disreputable term" due to its association with lack of professionalism, renunciation of science and excessive entrepreneurism.	92%

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		medical school curricula.					
Hepworth & Cushman (2005)[60] USA	Theoretical: Opinion piece	Discusses barriers to implementing the biopsychosocial model and proposes solutions to these.	N/A	Biopsycho-social		The biopsychosocial model involves analysing different "levels" of the "biological person in context such that each level of analysis impacts and is impacted by the others." Involves physician characteristics including thoroughness, competence, and compassion. Discusses the medical home concept as a similar term.	83%
Hermann (1989)[73] Israel	Theoretical: Opinion Piece	Advocates a "transitional model" ("split biopsychosocial model") of practice, in response to the practical difficulty of applying the biopsychosocial model.	N/A	Biopsycho-social		Argues that the biopsychosocial approach involves social, psychological, and biological knowledge and skills, however they don't necessarily need to be employed simultaneously in all encounters. Suggests a "split biopsychosocial model."	100%
Howie, Heaney & Maxwell (2004)[63] Scotland	Theoretical: Opinion Piece	Argues that patient centeredness and holism are the two concepts that best describe the core values of general practice. Discusses the Consultation Quality Index (CQI) instrument, which was designed to measure quality in relation to these values.	N/A	Holism		Defines holism as "the construction of diagnoses in biopsychosocial terms." Involves recognising and addressing relevant comorbidities; addressing preventive health; and providing continuity of care that facilitates patients revealing key personal information to the doctor. Uses "consultation length" and "how well the patient knows the doctor" as proxies for holism. States that "the biopsychosocial model is represented by the values of holism (representing the 'what') and patient-centeredness (representing the 'how')."	100%
Jimenez (2004)[36] Canada	Theoretical: Opinion Piece	Argues that family physicians are ideally placed to integrate research on	N/A	Biopsycho-social		The term biopsychosocial "implies that every person has biologic, psychological and social dimensions," and perceives how systemic characteristics in society act on these factors. Equates the term biopsychosocial with "a holistic view."	67%

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		biological and psychosocial aspects of the person.					
Margalit, Glick, Benbassat, Cohen & Margolis (2007)[46] Israel	Mixed methods study Note: Only the initial component of the study, in which family physicians are asked to determine what types of observed behaviour constitute a biopsychosocial consultation, is included in analysis. Subsequent tool validation is excluded due to being irrelevant to the research question.	"To identify the skill components of a biopsychosocial consultation beyond those of the patient centred interview, and develop an easy-to-use tool for their measurement."	Qualitative phase: 35 family physicians (respondents from 3 email discussion groups: 19 from USA, 6 from Canada, 5 from Europe, 4 from Israel, 1 from Australia)	Biopsycho-social		Three aspects of observed physician behaviour characterise a biopsychosocial consultation: -Patient-centred interview -System-centred and family-centred approach to care -Problem-solving orientation	50%
McWhinney (1980)[28] Canada	Theoretical: Opinion Piece	Discusses the meaning of holistic medicine.	N/A	Holistic Medicine		Holistic medicine is "understanding and treating illness in its context" and is not "unorthodox." Identifies 2 misunderstandings of holistic medicine: -Giving "license to pry into any aspect of a patient's personal life" -Encouraging "the 'medicalisation' of life'"	100%
McWhinney (1997)[64] Canada	Theoretical: Editorial	Argues that family medicine "transcends the dualistic dissociation of mind and body" and for the importance of this	N/A	Treating the whole person		"Treating the whole person" involves attending to both body and mind and recognising their interaction, rather than adopting a dualistic approach.	92%

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		approach.					
Medalie (1990)[65] USA	Theoretical: Opinion Piece	"…angina pectoris is examined to validate the concept of the biopsychosocial model."	N/A	Biopsycho-social		Expands the biopsychosocial model to include "family, neighbourhood, work environment, and community… [the] physician-patient relationship and an understanding of the physician's own beliefs [and] biases…" Emphasises that the biopsychosocial model incorporates reductionism. Argues that the biopsychosocial model does not allow for changes over time.	100%
Medalie (1978)[47] USA (author from Israel)	Book chapter	Describes "the interlocking dimensions of medical practice," including levels of practice, patterns of care and team members. Presents a conceptual tool ("practice-gram") to describe the extent of family medicine and evaluate types of practice.	N/A	Whole person approach		The whole person approach "sees the complaint, problem or disease in the context of a patient with physical, emotional and social attributes which cannot be separated from each other." Proposes a three level model of family medicine, including the individual level, family level, and community level. The whole person approach forms the second layer (above "the case approach" [ie. biomedical approach]) of the individual level within this framework. The family level and community level are not included in the whole person approach, but viewed as additional levels that build on the individual level.	92%
Murray, Kendall, Boyd, Worth & Benton (2003)[37] Scotland	Qualitative study	To determine whether GPs perceive they have a role in providing spiritual care, and factors they see as barriers/ facilitators to assessing spiritual needs and providing spiritual care.	GPs treating 40 patients with life threatening illness (20 heart failure NYHA grade III-IV, 20 inoperable lung cancer).	Holistic	Whole person	Spiritual care is part of the GPs role in providing holistic care.	32%
O'Brien, Wyke, Guthrie, Watt	Qualitative study	"To understand general practitioners'	19 GPs and PNs from 4 practices with a high	Whole person intervention		Found that a "whole person" approach might help to manage multimorbidity in the context of social deprivation.	95%

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& Mercer (2011)[38] Scotland		(GPs) and practice nurses' (PNs) experiences of managing multimorbidity in deprived areas and elicit views on what might help."	proportion of patients living in the top 15% most deprived areas of Scotland	Holistic		Components of a whole person intervention included: -Relationship -Making patients feel valued -Empowerment -Patient-centeredness -Understanding the context in which the patient manages Meaning of holism differed between GP practices: -Practice A, C, D: Taking interest in patients as people and building relationships with them; looking at patients' background and goals. -Practice B: Looking "at all the patient's conditions together." Placed limits between the medical and the social; did not view dealing with social issues as their role.	
Pauli, White & McWhinney (2000)[61] Switzerland/ USA/ Canada	Theoretical: Opinion piece/ literature review	Argues for an expansion of the biomedical model to incorporate "how each patient's experiences impinge on health status."	N/A	Biopsycho-social		Proposes a "psychosomatosociosemiotic" model that expands on the biopsychosocial paradigm and "seeks to explain why in a living, self-regulating system informational inputs are essential regulators of biological processes."	92%
Pietroni (1984)[58] England	Theoretical: Opinion Piece	Describes the principles underpinning the practice of holistic medicine, in the context of discussing the British Holistic Medical Association.	N/A	Holistic medicine		Identifies principles underlying holistic medicine: -"The whole is greater than the sum of the parts" -"The use of a wide range of medical interventions", including "orthodox approaches…whole person therapies and self-help skills…and 'alternative or complementary' methods" -"Education as well as treatment" -"Doctor-patient relationship" -"Physician heal thyself" philosophy	58%
Pietroni (1984)[29] England	Theoretical: Opinion Piece	Argues that a dualistic, mechanistic and reductionistic approach to medicine should be replaced with a monistic, humanistic and holistic approach.	N/A	Holistic Medicine	Whole person medicine	Principles of holistic medicine include: -Viewing the human as multidimensional (mind, body, spirit), with the whole being greater than the sum of the parts -Interconnectedness between humans and the environment -Disease resulting from imbalance -Humans' innate capacity for self-healing, with the primary task of the doctor to encourage this. This can often "be better accomplished through education than through direct intervention" -"Physician heal thyself" philosophy In addition to physical, psychological, and social factors, holistic	92%

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						medicine encompasses "new" fields of science such as psycho-neuro-immunology, physics, field force, systems theory, holographic theory of brain storage mechanisms, and nature of healing and healing energies. Holistic medicine is "not just about alternative or complementary medicine."	
Pietroni (1986)[30] England	Theoretical: Editorial	Addresses the debate surrounding the use of CAM. Specifically discusses holism, and funding of CAM.	N/A	Holism		Argues that holism is based on systems theory and "the educational model of health care" and transcends any particular therapy (ie. it is not exclusive to CAM).	58%
Pietroni (1986)[48] England	Theoretical: Symposium introduction	Introduction to a symposium of articles addressing CAM in general practice.	N/A	Holistic		A holistic approach includes "a willingness to take into account several factors in the causation of the presenting problem (physical, emotional, dietary, spiritual)…willingness to use a wide range of interventions…attempts to include the patient as much as possible in his own health care and draws attention to the importance of the practitioner's own state of well-being." Argues that the holistic approach is not restricted to complementary medicine.	75%
Pietroni (1987)[16] England	Theoretical: Symposium	Discusses developments in and definitions of holistic, alternative and complementary medicine; discusses general practice incorporating some of these.	N/A	Holistic medicine		States holistic medicine involves: "Responding to the person as a whole (body, mind and spirit) within the context of his environment (family culture and ecology) Willingness to use a wide range of interventions… Participatory relationship between the doctor and patient… Awareness of the impact of the 'health' of the practitioner on the patient." Argues that holistic approach is not restricted to complementary medicine.	83%
Pietroni (1997)[31] England	Theoretical: Opinion piece	The relationship between holism and reductionism – argues that a reductionist approach to "defining the parts" is an	N/A	Holistic	Whole person Biopsycho-social	Holism "is the study of the relationship between parts and the whole, ie. How parts are related to each other and come together to form a whole," and must encompass reductionism. Whole person medicine: -"Treats the whole person rather than the disease" in the context of their environment -Emphasises prevention	83%

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		essential element of holism.				-Involves doctor attending to their own health -Is willing to use a wide range of therapies The biopsychosocial model aims to place the patient in psychological and social context. Argues that a holistic approach is not restricted to complementary medicine.	
Rabinowitz (1999)[49] USA	Book chapter	"Review[s] the development of major theories of primary care practice, with a focus on their psychosocial aspects."	N/A	Biopsycho-social		"The biopsychosocial approach, based in systems theory, sets up a vertical hierarchy of levels of interactions that could be taking place in any clinical situation, ranging from the lowest (atomic level) through molecular, tissue, organ and individual levels, and beyond this to two-person, family, community and society levels."	100%
Rabinowitz, Cullen & Feinstein (1998)[74] USA	Theoretical: Opinion piece (Commentary)	"…proposes a model of family practice, based on host/ environment interactions, that combines aspects of biomedical, biopsychosocial, and [community oriented primary care]…models applicable to the care of individual patients."	N/A	Biopsycho-social		States that the biopsychosocial model's "multi-level complexity may deny a more holistic understanding of the patient."	92%
Risdon & Edey (1999)[50] Canada	Theoretical: Opinion piece	Discusses the importance of authentic physician-patient relationships in providing holistic care.	N/A	Treat[ing] the whole patient Holistic		"'Holistic' care means considering illness along with disease widening the physician's field of vision to include personal as well as pathophysiologic elements of the patient's experience of sickness…truly holistic care consciously places the *physician* in the system." Whole patient care involves treating "mind, body, and spirit, disease and illness." Argues that holistic care involves an authentic patient-physician relationship, involving self-awareness and intentional mutuality.	66%
Rosenblatt (1997)[59]	Theoretical: Opinion piece	Presents the ecobiopsycho-	N/A	Biopsycho-social		Expands upon the biopsychosocial model to present an "ecobiopsychosocial" perspective.	67%

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USA	(Commentary)	social perspective as an "expanded conceptual framework to grapple with global issues that affect individual health and the integrity and sustainability of the human community."		(specifically eco-biopsychosocial)			
Sawa (1988)[66] Canada	Theoretical: Opinion piece	"Outlines methods of incorporating the family into medical care."	N/A	Whole person medicine	Biopsycho-social model	Whole-person medicine: -"…demands a person-centred approach, but it also recognizes the 'context' or family setting of the ill person as inseparable from the healing process." -"…rejects a materialistic premise and encompasses subjective feelings and relationships, as well as the spiritual dimension. It views healing as restoring wholeness. It requires self-knowledge, moral awareness, a reflective habit of mind, and a capacity for reflective listening and for empathy." -Views the whole as greater than the sum of the parts; and results in personal growth of the physician. -"…does not integrate systems thinking into its conceptual framework." The biopsychosocial model "integrates social, psychological and biological factors in treating illness' using a systems approach."	100%
Sheldon (1989)[51] England	Theoretical: Opinion Piece	Summarises a report from the Churches' Council for Health and Healing on the Christian approach to whole person medicine.	N/A	Whole-person medicine		Emphasises the inclusion of spirituality in whole person medicine: "In an approach to medical care of the whole person it may not be enough to consider only the physical, psychological, and social aspects. These components can include emotional and volitional aspects of the person as well as his or her relationships. The whole-person approach may still be incomplete, however, if it excludes a consideration of the spiritual nature of man."	50%
Stange (2009)[52] USA	Theoretical: Editorial	"…explores an integrated way of understanding how the components of health care can	N/A	Holarchy of health care		Describes a "holarchy of health care" that includes fundamental health care (psychosocial acute and chronic illness, managing patient concerns), integrated care, prioritised care and healing/transcendence.	92%

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		work together to balance access, cost and quality."					
Stewart (1975)[32] Canada	Thesis	Aim: "…to devise a method of identifying whole person (holistic) care in the setting of family practice."	Defines holistic care by Pearson's procedure for operationalising a concept. Definition was reviewed by committee of 3 family physicians, who provided written comments, gave further opinion and weighted components of the definition Subsequent study (not analysed in this review) assessed two measures of patient care. Participants included 29 patients with chronic illness and 6 family physicians	Holistic care	WPC	Recognises that different definitions of holistic care have been offered. "Holistic care was defined as care which took account of the patient's physical, psychological and social problems. In other words, the physician viewed the patient's mind, body and environment as integral parts of his being and all these parts were taken into account in the physician's data gathering and management." Other features included: -Being "synergistic and not merely the sum of separate parts." -"…the consideration of the impact or implications of these factors on the daily life of the patient." -An understanding of human development. -"…a set of values and behaviours on the part of the physician…empathy, awareness of his own person and a neutral, non-judgemental view." -Preventive and family approach. Physicians disagreed on the relative weighting of the different components of the definition.	80%
Strandberg, Ovhed, Borgquist & Wilhelmsson (2007)[22] Sweden	Qualitative study	"…to explore the perceived meaning of a holistic view among general practitioners and district nurses."	22 GPs and 20 nurses working in primary care in two Swedish county councils. Divided into 4 GP focus groups and 3 nursing focus groups.	Holistic view		A holistic view involves: 1. Attitude: -Professional: The whole is seen as greater than the sum of the parts -Political/administrative 2. Knowledge: Factual and Tacit 3. Circumstances -Motivating factor -Organisation -Sphere of activity (house visits) -Tool (consultation, communication)	91%

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Sturmberg (2005)[53] Australia	Theoretical: Opinion Piece	"…describes, through a systems-based methodology, the translation of the somato-psycho-socio-semiotic understanding of health into a flexible teaching approach for students and in a postgraduate setting for registrars."	N/A	Holistic Care		Holistic care involves acquiring knowledge of the four dimensions of health and disease (somatic, psychological, social, semiotic), understanding the relationships between these components, and using this understanding to heal patients, while integrating the roles of different health care providers.	92%
Van Velden (2003)[33] South Africa	Theoretical: Opinion Piece	Describes the post-modern "holistic bio-psycho-social model," contrasting this with "the reductionalistic and scientific biomedical model of modernism."	N/A	Biopsycho-social	Holistic Whole person wellness	"…holistic health considers the whole person and how he/he interacts with the environment. Doctors become more patient-centred, rather than disease-centred…Optimal health is…the conscious pursuit of the highest qualities of the spiritual, mental, emotional, physical, environmental, occupational and social aspects of the human experience, as illustrated in the bio-psycho-social model." Features of a holistic biopsychosocial approach include: -Exploring genetic, physical, environmental, biological, social, intellectual, occupational, and spiritual aspects of health -Treating the patient in context of family and community -Entertaining subjectivity -"Person" concept replacing "disease" concept -Dialogue between doctor and patient, patient taking responsibility for their health Relates the holistic approach to post-modernism.	58%
Vogt, Hofmann & Getz (2016)[68] Norway	Theoretical: Opinion piece/ literature review	"…to analyse the concept of *holism* in P4 systems medicine, both with regard to its methods and conceptualization of health and disease."	N/A	Holistic		Argues that systems medicine (P4 medicine – predictive, preventive, personalised, participatory) "represents a *technoscientific holism* resulting from an altered, more all-encompassing technological gaze on human life and related changes in biomedicine's methods and philosophy, which points towards…*holistic medicalization* [in which]…each person's whole dynamic life process is defined in biomedical, technoscientific terms as controllable and underlain a regime of control…" (author's emphasis) Distinguishes between "humanistic holism" and "technoscientific holism" – "[P4 systems medicine] is not a return to the holism of	92%

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						humanistic medicine as in medicine that is focused on the defining capacities, subjective experience and values of whole persons. Rather, it is biopsychosocial, patient-centered and person-centered medicine – or the '*art'* of medicine – being redrawn in technoscientific terms" (author's emphasis).	
Vogt, Ulvestad, Eriksen & Getz (2014)[69] Norway	Theoretical: Opinion piece	Addresses "whether systems medicine [can] provide a comprehensive conceptual account of and approach to the patient and the root causes of health problems, and – furthermore – …[whether] such an account [can] be reconciled with the humanistic concept of and approach to the patient as a person."	N/A	Holistic		Argues that "systems medicine as currently envisioned cannot be said to be integrative, holistic, personalised or patient-centred in a humanistic sense," but must be "complemented with other methods."	92%
Wun (2002)[54] Hong Kong	Theoretical: Opinion Piece	"…proposes and discusses a simplified definition [of general practice or family medicine]: a general practitioner (GP) is a physician who personally provides whole person health care to individuals and families in their living environment."	N/A	WPC		Distinguishes between whole person and holistic care. Holistic care is "the cross-sectional view of a person at a certain point in the lifespan," whereas WPC "is the accumulation of many instances of holistic care throughout the lifetime", including care for multiple systems/organs.	92%

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PRISMA 2009 Checklist

Section/topic	#	Checklist item	Reported on page #
TITLE			
Title	1	Identify the report as a systematic review, meta-analysis, or both.	1
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.	2
INTRODUCTION			
Rationale	3	Describe the rationale for the review in the context of what is already known.	3
Objectives	4	Provide an explicit statement of questions being addressed with reference to participants, interventions, comparisons, outcomes, and study design (PICOS).	3
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.	3
Eligibility criteria	6	Specify study characteristics (e.g., PICOS, length of follow-up) and report characteristics (e.g., years considered, language, publication status) used as criteria for eligibility, giving rationale.	3
Information sources	7	Describe all information sources (e.g., databases with dates of coverage, contact with study authors to identify additional studies) in the search and date last searched.	3
Search	8	Present full electronic search strategy for at least one database, including any limits used, such that it could be repeated.	4
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).	3
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.	4
Data items	11	List and define all variables for which data were sought (e.g., PICOS, funding sources) and any assumptions and simplifications made.	4
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.	4
Summary measures	13	State the principal summary measures (e.g., risk ratio, difference in means).	N/A
Synthesis of results	14	Describe the methods of handling data and combining results of studies, if done, including measures of consistency (e.g., I^2) for each meta-analysis.	4

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PRISMA 2009 Checklist

Section/topic	#	Checklist item	Reported on page #
Risk of bias across studies	15	Specify any assessment of risk of bias that may affect the cumulative evidence (e.g., publication bias, selective reporting within studies).	N/A
Additional analyses	16	Describe methods of additional analyses (e.g., sensitivity or subgroup analyses, meta-regression), if done, indicating which were pre-specified.	4
RESULTS			
Study selection	17	Give numbers of studies screened, assessed for eligibility, and included in the review, with reasons for exclusions at each stage, ideally with a flow diagram.	4
Study characteristics	18	For each study, present characteristics for which data were extracted (e.g., study size, PICOS, follow-up period) and provide the citations.	Appendix 1
Risk of bias within studies	19	Present data on risk of bias of each study and, if available, any outcome level assessment (see item 12).	Appendix 1
Results of individual studies	20	For all outcomes considered (benefits or harms), present, for each study: (a) simple summary data for each intervention group (b) effect estimates and confidence intervals, ideally with a forest plot.	Appendix 1
Synthesis of results	21	Present results of each meta-analysis done, including confidence intervals and measures of consistency.	4-9
Risk of bias across studies	22	Present results of any assessment of risk of bias across studies (see Item 15).	N/A
Additional analysis	23	Give results of additional analyses, if done (e.g., sensitivity or subgroup analyses, meta-regression [see Item 16]).	4-9
DISCUSSION			
Summary of evidence	24	Summarize the main findings including the strength of evidence for each main outcome; consider their relevance to key groups (e.g., healthcare providers, users, and policy makers).	9-10
Limitations	25	Discuss limitations at study and outcome level (e.g., risk of bias), and at review-level (e.g., incomplete retrieval of identified research, reporting bias).	10
Conclusions	26	Provide a general interpretation of the results in the context of other evidence, and implications for future research.	10
FUNDING			
Funding	27	Describe sources of funding for the systematic review and other support (e.g., supply of data); role of funders for the systematic review.	10

From: Moher D, Liberati A, Tetzlaff J, Altman DG, The PRISMA Group (2009). Preferred Reporting Items for Systematic Reviews and Meta-Analyses: The PRISMA Statement. PLoS Med 6(7): e1000097. doi:10.1371/journal.pmed1000097

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BMJ Open

The Definition of Whole Person Care in General Practice in the English Language Literature: A Systematic Review

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The Definition of Whole Person Care in General Practice in the English Language Literature: A Systematic Review

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ABSTRACT

Objectives: The importance of "whole person" or "holistic" care is widely recognised, particularly with an increasing prevalence of chronic multimorbidity internationally. This approach to care is a defining feature of general practice. However, its precise meaning remains ambiguous. We aimed to determine how the term "whole person" care is understood by General Practitioners, and whether it is synonymous with "[w]holistic" and "biopsychosocial" care.

Design: Systematic literature review

Methods: MEDLINE, PubMed, EMBASE, CINAHL, PsycINFO, Web of Science, Proquest Dissertations and Theses, Science.gov (Health and Medicine database), Google Scholar, and included studies' reference lists were searched with an unlimited date range. Systematic or literature reviews, original research, theoretical articles, or books/book chapters; specific to general practice; relevant to the research question; and published in English were included. Included literature was critically appraised, and data was extracted and analysed using thematic synthesis.

Results: Fifty publications were included from 4297 non-duplicate records retrieved. Six themes were identified: A multidimensional, integrated approach; the importance of the therapeutic relationship; acknowledging doctors' humanity; recognising patients' individual personhood; viewing health as more than absence of disease; and employing a range of treatment modalities. Whole person, biopsychosocial, and holistic terminology were often used interchangeably, but were not synonymous.

Conclusions: Whole person, holistic and biopsychosocial terminology are primarily characterised by a multidimensional approach to care, and incorporate additional elements described above. Whole person care probably represents the closest representation of the basis for general practice. Health systems aiming to provide whole person care need to address the challenge of integrating the care of other health professionals, while maintaining the patient-doctor relationship central to the themes identified. Further research is required to clarify the representativeness of the findings, and the relative importance GPs' assign to each theme.

Funding: Australian Government under the Australian General Practice Training program.

PROSPERO Registration Number: CRD42017058824

STRENGTHS AND LIMITATIONS OF THIS STUDY

- To the best of our knowledge, this is the first systematic review of general practitioners' understandings of 'whole person', 'holistic' and 'biopsychosocial' care and the relationships between these terms.
- We used a comprehensive search strategy and included a broad range of literature types, to provide a sound understanding of these terms in English language general practice literature
- This study was limited to English language literature, so does not provide insight into the use of these or related terms in other languages.
- Related terms such as 'patient-centred' care, 'generalism' and 'comprehensiveness' were not specifically studied, and additional work is required to determine their relationship to our findings.
- There was considerable heterogeneity in included publications, and it is possible that other researchers may identify different themes from the same data.

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INTRODUCTION

Societies worldwide are currently facing an increasing prevalence of patients with chronic multimorbidity. Provision of "whole person care" (WPC) is particularly important in meeting the needs of these patients, and has been an objective of recent health care reforms in several nations.[1-3]

General Practitioners (GPs) are particularly well placed to provide WPC.[1] A whole person or holistic approach characterises the self-definition of general practice, with its importance recognised by GPs from diverse cultural contexts and by patients.[4-10] Historically, attention to WPC in Western medicine developed in critique of the biomedical model's reductionist framework.[11 12] In 1977, Engel proposed the "biopsychosocial" model, a paradigm shift that recognised psychological and social along with biological contributors to disease.[13] The terms "holistic" and "whole person" care have been used to denote a similar approach.[14-16]

However, a series on the research agenda for general practice in Europe identified that despite the "*implicit consensus about [the importance of an holistic approach] as an essential element for GP,*"[17] this lacked a clear practical definition, and little research had been conducted in the area. Indeed, "*many different definitions of holism, and holistic, are being used in health and the healthcare literature, and no one is quite sure what anyone else means when they use these terms.*"[18] While the terms "whole person", "[w]holistic," and "biopsychosocial" care are sometimes used interchangeably, it is unclear whether they are synonymous, with differences between definitions proposed by general practice organisations.[4 7 9] Additionally, it has been suggested that a commitment to WPC in general practice may be more rhetorical than practical.[11 19] Given the core commitment of general practice to providing whole person, or holistic, care, as expressed in statements such as the World Organisation of Family Doctors' (WONCA) definition of general practice, this issue deserves attention.[4] While studies have previously defined "holistic care," "wholistic health care," and "holistic practice," these have either focussed primarily on the context of nursing, or been conducted in a limited geographical location, and it is unclear whether their findings are transferrable to the general practice context.[20-23] In order to evaluate the current concept of WPC within general practice and to design health system practices to provide WPC in a changing health climate effectively, it is first necessary to clarify how this term is defined. We conducted a systematic literature review and thematic analysis aiming to define how the term WPC is understood in general practice and whether it is synonymous with [w]holistic and biopsychosocial care.

METHODS

Protocol and Registration

We prospectively registered a study protocol on the International Prospective Register of Systematic Reviews (PROSPERO) database (registration number CRD42017058824). This is available at https://www.crd.york.ac.uk/PROSPERO/display_record.php?RecordID=58824

Search Strategy

We searched the MEDLINE, PubMed, EMBASE, CINAHL, PsycINFO and Web of Science databases for published literature, and Proquest Dissertations and Theses, Science.gov (Health and Medicine database), and Google Scholar for grey literature, to April 2017. These databases were chosen to provide broad coverage of relevant subject areas. Results from Science.gov were limited to the "top results" reported (maximum 500) and Google Scholar searches to the first 50 hits for each search string. We hand searched the reference lists of included studies.

We developed search terms iteratively, then performed a pre-planned search. The final strategy combined search terms for holistic, whole person or biopsychosocial with terms for general practice. The MEDLINE search strategy is shown in table 1, and was modified for other databases. Shorter search strings combining key search terms were used for Science.gov and Google Scholar due to functional limitations.

Inclusion criteria: Peer reviewed systematic or literature reviews, original research (qualitative studies, quantitative studies with findings expressed as descriptive statements for inclusion in qualitative analysis), theoretical articles, or books/book chapters; literature specific to general practice (studies with a majority of GP or GP registrar participants or separate reporting of their views; text/opinion authored exclusively by GPs or GP registrars, or with at least one GP/GP registrar author and a focus on the general practice context); relevance to

*Note: The term general practice/general practitioner is used to incorporate both general and family practice throughout this report.

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the research question (included descriptions, definitions or theoretical models of the terms "whole person," "holistic," or "biopsychosocial" (care/medicine etc.)); and published in English.

Exclusion criteria: Non-English articles; articles not specific to general practice; literature authored by general practice professional organisations. The latter was excluded to achieve an understanding of WPC within academic general practice literature, which was likely to be the basis of general practice organisations' literature.

All eligible citations were uploaded into Endnote X8 and duplicates removed. Two independent reviewers (HT and JR) screened titles and abstracts. Studies that did not meet inclusion criteria were excluded, with disagreements resolved by discussion. A single reviewer (HT) assessed full text of remaining literature against inclusion criteria. Studies that this reviewer considered borderline or suitable for inclusion were reviewed by at least one other author (GM and/or MB), with disagreements resolved by discussion.

Table 1: Medline Search Strategy

((whole N5 person) OR whole-person OR (whole N5 patient) OR whole-patient OR wholistic OR wholism OR holism OR (holistic N5 medicine) OR (holistic N5 care) OR (holistic N5 view) OR (holistic N5 approach) OR (holistic N5 model) OR biopsychosocial OR bio-psycho-social OR bio-psychosocial OR biopsycho-social OR biopsychosociospiritual OR bio-psycho-socio-spiritual OR (MH holistic health) OR person-focused OR ("person focused")) AND (("general practi*") OR ("family doctor") OR ("family physician") OR ("family medicine") OR "generalist" OR (MH general practice) OR (MH general practitioners) OR (MH family practice) OR ("primary care") OR ("primary health care") OR (MH primary health care) OR ("primary health*") OR ("family practi*"))

Quality Appraisal

Qualitative studies' conduct and reporting were critically appraised using Kmet et al's Standard Quality Assessment Criteria.[24] An additional question, "Have ethical issues been taken into consideration?" was added, to give a total possible score of 22. Validity and authenticity of book chapters and opinion pieces were appraised using JBI's Critical Appraisal Checklist for Text and Opinion.[25] Initially, two reviewers (HT and MB) independently appraised five pieces of literature with disagreements resolved by discussion. Subsequent quality assessment was performed by a single reviewer (HT). No studies were excluded due to quality.

Data Extraction

Details including author, year, country, type of literature, population focus (for qualitative studies), key term (holistic, whole person, biopsychosocial), and descriptions of key terms were extracted by two reviewers (HT and MB) for an initial five pieces of literature and consensus was achieved. A single reviewer (HT) extracted data from remaining literature.

Data Analysis

Full text of included studies was uploaded into NVivo 11. Original data relevant to the research question (including relevant results and original statements in discussion of qualitative studies, and original statements in books and theoretical pieces) were thematically coded. Two independent reviewers (HT and MB) performed coding inductively on an initial sample of five pieces of literature to search for concepts, with disagreements resolved by discussion. Following this, a single reviewer (HT) coded other literature. Subsequent studies were coded into pre-existing concepts, and new concepts were created when deemed necessary.

Thematic synthesis was performed by a single reviewer (HT) and discussed with another two reviewers (GM and MB) for consensus.[26] Thematic synthesis was chosen as it allows development of interpretive theories while remaining close to the primary data. The terms "whole person," "holistic," and "biopsychosocial" were then compared by exploring similarities and differences between the themes represented within each term, assisted by NVivo query functions. It was identified during analysis that variations of "holistic" terminology (eg. holistic care, medicine, etc.) may have different connotations, and these were subsequently compared. Temporal and geographic variations in usage were found to be absent.

Patient and Public Involvement

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This research was done without patient involvement, due to its primary focus being on the understanding of WPC among GPs, and its nature as a systematic review. As such, no ethical review was required.

RESULTS

Searches retrieved 4297 non-duplicate publications. Following title/abstract screen, 587 publications were selected for full text retrieval. We were unable to access eight of these despite conducting a library search. Of the remaining publications, fifty met inclusion criteria (figure 1). These originated from 12 countries, and comprised 5 qualitative studies, 40 theoretical articles, 4 book chapters, and 1 thesis. The primary terms of interest were "holistic" in 24 sources, "whole person" in 9 sources, "biopsychosocial" in 14 sources, both whole person/holistic in 2 sources, and both whole person/biopsychosocial in 1 source. None of the papers using whole person and only one paper using biopsychosocial terminology specifically aimed to define these terms, whereas multiple papers specifically defined holistic terminology.[16 18 22 27-33] The characteristics of included literature and results of quality assessment are shown in Appendix 1. We believe theoretical saturation was reached.

Thematic Synthesis

There was substantial heterogeneity in the literature. However, six overarching themes were identified, each with between one and four subthemes. These are shown in table 2 and discussed below. Few sources specifically drew a distinction between whole person, holistic, and biopsychosocial terminology, with several using these terms interchangeably.[29 31-38] However, on overall analysis we identified differences in emphasis, as discussed below and illustrated in figure 2. Sub-themes that are relevant to more than one of the three terms overlap in the diagram.

Table 2: Themes and Subthemes

Theme	Subthemes	Terms Characterised by This Theme
Employs a multidimensional, integrated approach	-Considers multiple aspects of the person and their context -Integrates these aspects such that the whole is seen as greater than the sum of the parts	Biopsychosocial (multidimensional +/- integrated) Whole person Holistic
Importance of the therapeutic relationship	-Values the therapeutic relationship -Places importance upon personal attributes of the doctor that foster the therapeutic relationship -Employs a collaborative approach that emphasises patient responsibility -Values continuity of care	Biopsychosocial (variable) Whole person Holistic
Acknowledges the humanity of the doctor	-Places importance upon doctor self-awareness -Adopts a "physician heal thyself" philosophy -Identifies potential for personal growth of the doctor through treating the patient	Biopsychosocial (self-awareness) Whole person Holistic
Recognises the individual personhood of each patient	-Views patients as individual, unique persons -Focuses on the person rather than on the disease -Distinguishes between disease (a pathological derangement) and illness (a broader term encompassing the effect of disease on the patient's life)	Biopsychosocial (minor theme) Whole person Holistic
Health as more than absence of disease	-Health is viewed as more than the absence of disease -Disease is viewed as a state of imbalance and healing as restoring the balance of health -Emphasises preventive health measures	Biopsychosocial (minor theme) Whole person (minor theme) Holistic
Employs a range of treatment modalities	-Use of a range of treatment modalities -May include (but is not synonymous with) CAM	Biopsychosocial Whole person Holistic (specific focus on CAM)

1. A Multidimensional, Integrated Approach

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Employing a multidimensional, integrated approach, rather than a biomedical reductionist model, was the dominant theme throughout the literature.

The literature emphasised that biopsychosocial, holistic and whole person approaches must address multiple aspects of the person and their context, rather than being strictly biomedical.[16 18 22 27 31 33 34 36 39-54] In a paper discussing the definition of holism, Freeman stated that:

"*An approach to health and medicine that is not reductionist is an implicit part of the comprehensive care provided by GPs. We are not doctors for particular diseases, or particular organs, or particular stages in the life cycle — we are doctors for people.*"[18]

Similarly, in a study on the perceived meaning of a (w)holistic view among GPs and district nurses in Sweden, Stranderg et al found that:

"*Biomedical attitude is not enough. There is a need for a multidimensional viewpoint including a bio-psychosocial attitude towards the patients.*"[22]

Which important aspects of the "whole" to include in care varied. Biological, psychological and social factors were commonly identified.[12 14 16 18 22 27 29 32 33 36 39-43 45-47 49 51 53-56] Some GPs argued for the importance of additional factors. Spirituality was prominent among these.[14 29 33 34 37 39 40 42 44 48 50 54 57 58] Murray et al concluded from their study on GPs' views on their role in providing spiritual care that:

"*The whole-person approach to medicine may be incomplete if it lacks consideration of the spiritual dimension.*"[37]

The patient's ecological/environmental context was also emphasised by some GPs.[14 59]

The literature also emphasised that aspects of the person must be viewed in an integrated fashion.[16 18 27-29 31-33 36 39 40 42-47 52 53 55 56 58 60] In their study on the meaning of an (w)holistic view, Stradberg et al found that:

"*The participants discussed the concepts 'the whole' versus 'parts of the whole'. Many meant that the whole actually is greater than the sum of all the parts…*"[22]

Similarly, Pietroni stated that a key principle of holistic medicine is that:

"*The human organism is a multidimensional being, possessing body, mind and spirit, all inextricably connected, each part affecting the and whole and the whole being greater than the sum of the parts.*"[29]

Sturmberg identified "*understanding the interconnectedness of various illness aspects*"[53] as the second step in an approach to teaching holistic care.

One exception to this emphasis upon a multidimensional, integrated approach was identified in O'Brien et al's study. GPs in one practice in this study understood holism as caring for a patient's multiple comorbidities, and placed boundaries between "the medical" and "the social."[38] Some authors also proposed a 'split biopsychosocial model' in which different components of care are selectively addressed depending on the patients' presentation, though the utility of this approach was debated.[43 60-62]

Employing a multidimensional, integrated approach to care was the key theme characterising each of the biopsychosocial, holistic, and whole person terminologies.[16 18 22 27 29 31-34 36 39-56]

Biopsychosocial terminology was the most specific of the terms in defining the aspects of care that it addressed (biological, psychological, social).[36 41 43 46] Some GPs suggested the biopsychosocial approach was too narrow, and should be expanded to a "biopsychosociospiritual,"[34 39] "ecobiopsychosocial,"[59] or "psychosomatosociosemiotic" model.[53 63] Occasionally the term biopsychosocial was used to incorporate these broader aspects.[33] There was some debate regarding whether the biopsychosocial model employed an integrated approach, with some arguing that it remained dualistic.[49 55 64]

Whole person and holistic terminology were less specific than biopsychosocial in defining their domains of care, encompassing a varied and broad range of biological, psychological, social, spiritual, and

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environmental/ecological aspects.[16 18 27 34 39 40 42 44 47 48 51 54] Some models of WPC specifically distinguished between care of the person (body, soul, spirit) and external factors (social, environmental).[39 47] However, these still addressed external factors in their overall approach to care. Emphasis upon an integrated approach was strongest in holistic terminology, and also present in whole person terminology.[16 18 27-29 31 32 39 40 44 45 52 53 55 56 58]

2. Importance of the Therapeutic Relationship

The importance of the therapeutic relationship, a collaborative approach, and characteristics of the doctor that fostered this relationship was emphasised.[12 14 16 22 27-30 32 33 35 38 39 42 43 45 46 48 50 52 54 55 57 65-69]

The therapeutic doctor-patient relationship was valued.[12 28 29 50] Risdon stated that:

"*True healing and mending of brokenness is possible only within an authentic human relationship.*"[50]

Similarly, McWhinney argued that:

"*There is a growing body of scientific evidence that human relationships are an important factor in the favorable outcome of illness. Thus we have support for the ancient belief in the healing power of the physician.*"[28]

O'Brien et al included relationship as a suggested component in a whole person intervention.[38] One GP in their study:

"*describ[ed] how she felt the essence of the GP (relationship, intuition, support and continuity) had been lost with the medical nuts & bolts of monitoring…, a view supported by her colleagues.*"

Personal qualities of the doctor that fostered the therapeutic relationship were emphasised.[18 27 29 32 38 39 46 52 55 57 60 61 65 67 69] These included characteristics such as being fully present, attentive to and interested in the patient, supportive (compassionate, empathetic, respectful, non-judgemental etc.), and possessing knowledge and understanding of the patient in addition to technical competence. Participants in Strandberg's study identified that an important component of a holistic view was:

"*finding the patient's hidden agenda and listening to what the patient is actually saying.*"[22]

Multiple sources emphasised a collaborative approach, with patients taking responsibility for their health.[14 16 27 29 30 33 38 43 45 46 48 50] Van Velden expressed this succinctly, stating that:

"*[in the] holistic bio-psycho-social model…the doctor-patient relationship changes from one of monologue to one of dialogue, with the doctor no longer instructing the patient but rather involved in negotiating with the latter. People start taking responsibility for personal choices rather than deferring to the rules of institutions.*"[33]

Illness may be viewed as an opportunity for personal growth. Borins stated that:

"*sometimes illness can be a creative opportunity for the patient to learn more about himself and the direction he is taking…Sometimes physical or emotional pain can inform a person that he must change his life and grow.*"[14]

Finally, some sources identified continuity as an important aspect of the doctor-patient relationship.[22 42 54 66] One author specifically distinguished between holistic and WPC on the basis that continuity was a feature of whole person but not of holistic care.[54] However, this distinction was not found elsewhere in the literature.

Emphasis upon the doctor-patient relationship was prominent within whole person and holistic literature.[14 16 27 29 30 32 35 38 39 42 45 48 50 52 54 55 57 66 67 69] Literature on the biopsychosocial approach was mixed, with the doctor-patient relationship emphasised in papers that specifically focussed on the practical application of a biopsychosocial approach.[46 61 65] An alternative view also existed, that considered the biopsychosocial model an ethically neutral scientific theory rather than an approach to care.[41]

3. Acknowledges the Humanity of the Doctor

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The literature placed importance upon acknowledgment of the doctor's humanity. This encompasses self-awareness, a "physician heal thyself" philosophy, and the potential for personal growth of the doctor through the clinical interaction.[12 14 16 29 31 32 39 42 44 48 58 61 65 68 69]

Several sources argued for the importance of doctors' self-awareness.[12 32 50 61 65 68] Stewart stated that:

"*holistic care implied a set of values as well as behaviours on the part of the physician; this set would include…awareness of his own person...*"[32]

Epstein also implied the importance of self-reflection when discussing how to apply the biopsychosocial vision, suggesting that doctors ask themselves:

"'*What parts of your self are you engaging in the care of this patient, right now?' and then, 'Does it have to be that way?*'"[65]

A "physician heal thyself" philosophy was emphasised[14 16 29 31 39 42 44 48 58] Brown stated that:

"*Holistic care means practitioners matter too. We need to look after ourselves, not only to be an example to our patients, but for our own well-being and that of our families.*"[42]

Similarly, Borins stated that:

"*An important concept of holistic medicine is that of 'Physician, heal thyself'. The more complete we are in our own spiritual, psychological and physical development, the easier it will be to help someone else on the path of positive growth.*"[14]

A minor subtheme is the potential for personal growth of the doctor through treating the patient.[12 39 69] In reference to spiritual care, Anandarajah stated that:

"*physicians have the potential to heal and be healed through their clinical interactions, as clearly illustrated by numerous physician stories.*"[39]

Sawa stated that:

"*The practice of whole-person medicine increases the practitioner's personal growth and develops his or her analytic skill and ability to think in terms of a complex web of contributing factors, rather than in terms of single chains of causal relationships.*"[69]

Recognising doctors' humanity is a feature of biopsychosocial, holistic and whole person terminology, however the specific subthemes represented in these terminologies differed. Doctors' self-awareness featured in literature describing all three terms.[12 32 50 61 65 68] A "physician heal thyself" philosophy primarily characterised holistic, and to a lesser extent WPC.[14 16 29 31 39 42 44 48 58] Potential for personal growth of the doctor was a minor theme of some sources on holistic and WPC.[12 39 69]

4. Recognises the Individual Personhood of Each Patient

Recognition of the unique personhood of each patient within their individual context also characterised the literature.[28 42 44 50 55 60] McWhinney stated that:

"*Understanding and treating illness in its context is what holistic medicine means to me…The natural [holistic] diagnostician tends to notice what is unique in each patient. He is reluctant to classify and label, and he does not separate the disease from the man or the man from his environment.*"[28]

Focus was placed upon the person rather than the disease.[14 27 31 33 38] In a study exploring how GPs who practised complementary therapies understood the term "holism" Adams identified that they viewed:

"*holism in terms of treating a person rather than simply a patient. These doctors suggest that treating an individual as a patient leads to 'unhealthy' focus upon disease and a failure to acknowledge what they see as the complex and multilayered nature of illness.*"[27]

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Some papers distinguished between disease and illness.[22 27 50] Strandberg's study identified that to have a holistic view:

"*GPs and nurses have to deal with the gap between 'illness' and 'disease', i.e. what the patient experiences and what is the medical problem.*"[22]

Recognising patients' individual personhood primarily characterised whole person and holistic terminology.[22 27 28 31 38 40 42 44 50 55] Variations on this theme were occasionally present in biopsychosocial literature.[33 60]

5. Health as More than Absence of Disease

Papers incorporating this theme viewed health as more than absence of disease.[33 40] Van Velden stated that:

"*Optimal health is therefore much more than the absence of disease or infirmity. It is the conscious pursuit of the highest qualities of the spiritual, mental, emotional, physical, environmental, occupational and social aspects of the human experience, as illustrated in the bio-psycho-social model.*"[33]

Some sources conceptualised disease as a state of "imbalance" and healing as restoring the balance of health.[29 33 53 69] Pietroni, for example, stated that:

"*Disease or ill-health arises as a result of a state of imbalance, either from within the human being or because of some external force in the environment…*"[29].

Preventive health measures were also emphasised.[14 31 32 35 40 52 66]

Aspects of this theme were included in whole person, holistic, and biopsychosocial care.[14 29 31-33 35 40 52 53 66 69] However, it was most pronounced in the holistic literature.[14 29 31 32 40 52 53 66]

6. Employs a Range of Treatment Modalities

Utilising a wide range of treatment modalities was the final theme identified.[14 16 18 27 31 33 39 48 53 58]

Examples include Anandarajah's suggestion of treatment modalities in her body, mind, spirit, environment, social, transcendent (BMSEST) model of WPC.[39] These ranged from medication, surgery and physical therapy, to counselling and cognitive therapy, spiritual counselling, compassion, presence, and connection. Margalit's study on the practical application of the biopsychosocial model identified that offering not only medication, but also advice on health promotion and managing emotions characterised a biopsychosocial doctor-patient encounter.[46]

A subset of literature using holistic terminology specifically included the use of complementary and alternative medicine (CAM).[18 27 29 31 34 40 48 58] Pietroni stated that:

"*An holistic approach…involves a willingness to use a wide range of interventions – traditional medical interventions, alternative approaches and self-help measures.*"[48]

However, the literature consistently emphasised that CAM is not holistic if used in isolation.[14 16 18 22 27-31 35 48] Pietroni stated that:

"*Holism is more than a pot-pourri of therapies. It is an approach to health and disease that transcends any particular therapy…Holism should not be confused with the positive-health movement nor with the complementary medicine movement. Many complementary practitioners do not have an holistic approach and use their therapies in the traditional reductive manner. Conversely, many doctors who know nothing of homeopathy or acupuncture adopt a whole-person approach to their work and have done even before the word holistic became current.*"[30]

Similarly, in his study on GPs who practise complementary therapies, Adams found that:

"*Many of the GPs are keen to stress that a holistic approach does not evolve simply with their development of complementary practice. They talk of always having been holistic and how holism is not confined to complementary medicines.*"[27]

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Additionally, McWhinney wrote that:

"*There is nothing unorthodox about holistic medicine. Unfortunately, the term has been used so much by unorthodox groups of healers, that it is in danger of losing some of its meaning for us. I do not wish to suggest that we should ignore the contribution which unorthodox methods can make to healing. Let us remember, however, that the holistic approach has a long and distinguished history in orthodox medicine itself.*"[28]

The use of a wide range of treatment modalities characterised whole person, holistic, and biopsychosocial care.[14 16 18 27 31 33 39 48 53 58] However, the inclusion of CAM was a specific characteristic of holistic terminology.[18 27 29 31 34 40 48 58] A distinction was found between various "holistic" terms in this respect. Sources that discussed "holistic *medicine*" or "holistic *health*" frequently incorporated CAM, with the exception of McWhinney's paper describing holistic medicine.[14 16 27-29 31 58] Conversely, sources discussing "holistic *care*" rarely referred to the use of CAM. This suggests that the term "holistic care" does not necessarily imply incorporation of complementary approaches within the GP context. The terms holism, "holistic approach" and "holistic view" were more varied in this respect, making these terms somewhat more ambiguous.[18 27 28 30 34 36 38 48 55 66]

Specific Distinctions Between Whole Person, Holistic and Biopsychosocial Terms

Whole person, holistic, and biopsychosocial terminology were used interchangeably in several papers.[29 31-38] Some papers did specifically differentiate these terms, but with no consistency among the literature.[29 35 54 55 64 66 69] Davidsen implied that the biopsychosocial approach is not holistic due to a lack of integration between the components it addresses.[55] Grantham differentiated the biopsychosocial approach from holistic medicine, arguing that the latter implied inclusion of CAM.[35] Howie argued that the biopsychosocial approach comprised patient-centeredness in addition to holism.[66] Sawa differentiated between whole person medicine and biopsychosocial theory by the inclusion of systems theory in the latter.[69] Wun distinguished between whole person care and holistic care by an additional element of continuity of care in the former, stating that:

"*Whole person care is the accumulation of many incidences of holistic care throughout the lifetime.*"[54]

Pietroni made a different distinction between these terms, arguing that holistic care includes:

"*more recent scientific discoveries' (such as psychoneuroimmunology, physics and field forces) in addition to whole person medicine.*"[29]

On overall analysis of the literature, however, representation of themes discussed above differed between the terms, as illustrated in figure 2.

"Technoscientific Holism"

One alternative description of holism in the literature was "technoscientific holism" described by Vogt.[70 71] Vogt analysed whether P4 systems theory, a "*predictive, preventive, personalised and participatory*" approach to medicine, was holistic. In doing so, he specifically differentiated between the "technoscientific holism" of systems theory, and an approach more similar to that described above, which he refers to as the "holism of humanistic medicine".[70] He describes "technoscientific holism" as:

"*resulting from an altered, more all-encompassing technological gaze on human life and related changes in biomedicine's methods and philosophy", in which "the whole continuum of health and disease states…is defined as potentially quantifiable, predictable and* actionable"[70] (author's emphasis).

This concept is unique in the included literature.

DISCUSSION

Our analysis suggests that GPs understand WPC to be an approach that considers multiple dimensions of the patient and their context, including biological, psychological, social, and possibly spiritual and ecological factors, and addresses these in an integrated fashion that keeps sight of the whole. It employs a range of treatment modalities to achieve this aim. Additionally, it emphasises the therapeutic value of the doctor-patient relationship, characterised by an attentive, supportive, and collaborative approach. Additional less pervasive features of WPC included recognition of the doctor's humanity, comprising self-awareness and attending to

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their personal health, and adopting a view of health as more than absence of disease. While few sources drew a distinction between whole person, holistic, and biopsychosocial terminology, and several used these terms interchangeably, on overall analysis the terms differed in their emphasis. Their unifying feature was a multidimensional approach to care, in contrast to pure biological reductionism. However, biopsychosocial care was overall described more narrowly than WPC, with clearer definition of the domains of care addressed (biological, psychological, social), while holistic terminology was somewhat broader than WPC, with greater focus on health as wholeness, and at times specific inclusion of CAM. The term “holistic care” was more similar to WPC than “holistic medicine” or “holistic health”, particularly with respect to the inclusion of CAM in the latter terms. Our findings enable clearer communication through selection of the term most appropriate to the context under discussion.

Our findings were similar to those of previous concept analyses that aimed to define “holistic” care without a specific focus on general practice, which consisted of mostly nursing-focussed literature.[20 21 23] One difference was that these did not specifically emphasise acknowledging the humanity of the practitioner, though they did mention the importance of self-awareness. Our findings are also similar to definitions of whole person or holistic care provided by general practice professional organisations, supporting our reasoning that they were derived from the literature. Several shared an emphasis on a multidimensional approach to care.[4 7 9] Consistent with our findings, their definitions vary in the explicit inclusion of spiritual/existential, cultural and ecological dimensions in a whole person/holistic approach. The Royal College of General Practitioners’ definition incorporates an additional focus on the importance of transitioning from a diagnostic/curative to a palliative/supportive role when appropriate.[9] In view of our findings, organisations with narrower definitions of holistic/WPC may wish to explore whether the GPs they represent consider the additional characteristics identified in our study to be important features of this care, and consider expanding their definitions if this is the case.

There was heterogeneity in included literature, and one theory that may explain this has been suggested by Vanderpool.[72] He suggested that holistic terminology is used in four distinct ways, which have evolved from four approaches to medicine: biopsychosocial, whole person, “high level healthiness,” and “unconventional and esoteric diagnosis and healing”. His descriptions of biopsychosocial and whole person approaches are similar to those identified in this review, with a greater focus on interpersonal elements in whole person than biopsychosocial care. If his theory is correct, it would explain why “holistic” was the broadest of the terms studied: it is being used to describe biopsychosocial care, whole person care, and additional distinct traditions included in other themes we identified (health as a state of wholeness, CAM). The distinction between usages was not as clear in our study as suggested by Vanderpool’s framework; however, this may be due to mixing of usages arising from lack of definitional clarity. In view of this and of our findings, Vanderpool’s suggestion that terms that are more specific should be used in preference to “holistic” terminology seems advisable. Where both multidimensional/integrated care and relational elements of care (the doctor-patient relationship, recognising patients’ individuality) are in view, we would suggest WPC as the preferred term. If additional themes such as using CAM are in view, we would suggest that this should be stated specifically to avoid confusion.[28 70 73]

Our findings raise several practical implications and questions for future research. First, our findings were consistent with previous observations that there is little primary research defining our terms of interest in general practice.[17] Only six pieces of primary research, of variable quality, were identified.[22 27 32 37 38 46] Opinion pieces may have reflected the views of GPs with a strong interest in biopsychosocial/whole person/holistic care, and primary research is required to determine the relevance of our findings to the broader GP context. Second, due to heterogeneity among included literature, with many pieces only including a selection of identified themes, it remains unclear whether GPs would share consensus that all of these features characterise the terms of interest, what relative weighting should be applied to each, and which aspects of care in addition to biological, psychological, and social factors are included. Previous studies have gone some way to addressing this issue, particularly regarding GPs’ role in addressing existential and spiritual factors, however work remains to be done.[74 75] Further research is also required to explore the facilitators, barriers, and outcomes of WPC as described. Finally, our definition of whole person care shares close similarities with the concepts of ‘patient-centred’ or ‘person-centred’ care, and of ‘generalism’.[76-78] We limited our focus in this study to the terms ‘whole person’, ‘holistic’ and ‘biopsychosocial’ care, as these appeared to be used interchangeably in some literature, and frequently differentiated from the term ‘patient-centred’ or ‘person-centred’ care. [4 7 79] However, given their close similarities, future studies could explore the relationship between these terms.

Our findings have practical implications in the context of primary health system reforms that aim to provide WPC in response to the increasing prevalence of patients with chronic multimorbidity. They enable GPs to reflect on their individual practice with respect to WPC, and could inform focussed education and refinement of

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clinical approaches to provide WPC. They also suggest that WPC requires both multidimensionality and integration. Achieving both can be challenging, particularly where multiple providers are involved in care. However, our findings suggest that to provide WPC, this is essential. Proposals for health system redesign have included strategies such as improved communication between providers and integration of health care systems, which go some way toward addressing this issue.[2 3] Our findings suggest that such system changes need to embed an enduring, therapeutic patient-GP relationship, which must not be overlooked in a quest to achieve efficiency and tangible outcomes. Previous health reforms have at times neglected this relational aspect of care.[2 11] Our findings highlight the danger that such an approach may fail to deliver the whole person approach that ideally characterises primary care. Finally, our work raises ethical questions regarding where the boundaries of the doctors' role lie, and whether employing a multidimensional approach encourages the medicalisation of life. Some authors have argued that this approach in fact breaks the cycle of medicalisation and iatrogenesis through considering non-biomedical contributors to disease. [28 73] Vogt, however, identifies 'the medicalisation of health and life itself' as a potential danger of 'technoscientific holism', which he differentiates from the more 'humanistic holism' discussed in most of the literature, as discussed previously.[70] He suggests a focus on 'quaternary prevention' (a concept also discussed by other authors that focusses on preventing overmedicalisation) to address this.[80] These aspects deserve consideration when applying a whole person approach.

Strengths of this study include its comprehensive search strategy and broad range of literature included, resulting in inclusion of a large number of publications from a broad geographical distribution. As a result, we can be confident that our results represent a comprehensive summary of the understanding of WPC in the English language general practice literature. We do note that most of the countries represented have Western-style health systems, though the gatekeeper role of the GP within these systems varies. This may reflect an absence of literature from countries with other health system structures on this topic, or the unavailability of this literature on database searching. Limitations of this study include our decision not to include definitions from professional associations representing general practice, as these were considered to have been derived from existing work rather than introducing original concepts. Our study only included English language literature, so does not provide insight into the usage of similar terminology in other languages. Finally, there was considerable heterogeneity in the papers, and it is possible that other researchers may identify different themes from the same data.

CONCLUSION

Within general practice literature, the terms whole person, biopsychosocial, and holistic care share an emphasis upon a multidimensional, integrated approach to care, and also incorporate additional themes which vary among the terms as discussed. These findings can inform GPs self-reflective practice and the design of health systems that foster true WPC. Further research is required to explore the transferability of our findings, together with the facilitators, barriers, and outcomes of WPC as defined.

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FIGURE LEGENDS

Figure 1: PRISMA Diagram

Figure 2: The Interrelationship Between Biopsychosocial, Whole Person and Holistic Terminology
Features of each approach are included within their respective circles in the diagram. Features placed on the circles' boundaries are a minor feature of the inner circle term, but more pronounced in the outer circle/s term. The diagram illustrates that biopsychosocial was the narrowest but most well defined of the terms, encompassing multidimensional +/- integrated care, and the use of a range of treatment modalities. Minor themes of the biopsychosocial approach include recognising the individual personhood of each patient, and viewing health as more than absence of disease. Some sources that specifically discuss the practical application of the biopsychosocial approach also emphasise the importance of the therapeutic relationship and of acknowledging the humanity of the doctor.
Holistic and whole person terminology were broader than biopsychosocial. These terms included a stronger emphasis on the therapeutic relationship, recognition of the patients' individual personhood and the humanity of the doctor, and a view of health as a state of wholeness and balance than represented in biopsychosocial care. Whole person and holistic care were essentially synonymous. "Holistic medicine"/"holistic health" were related broader terms that sometimes incorporated complementary and alternative medicine.

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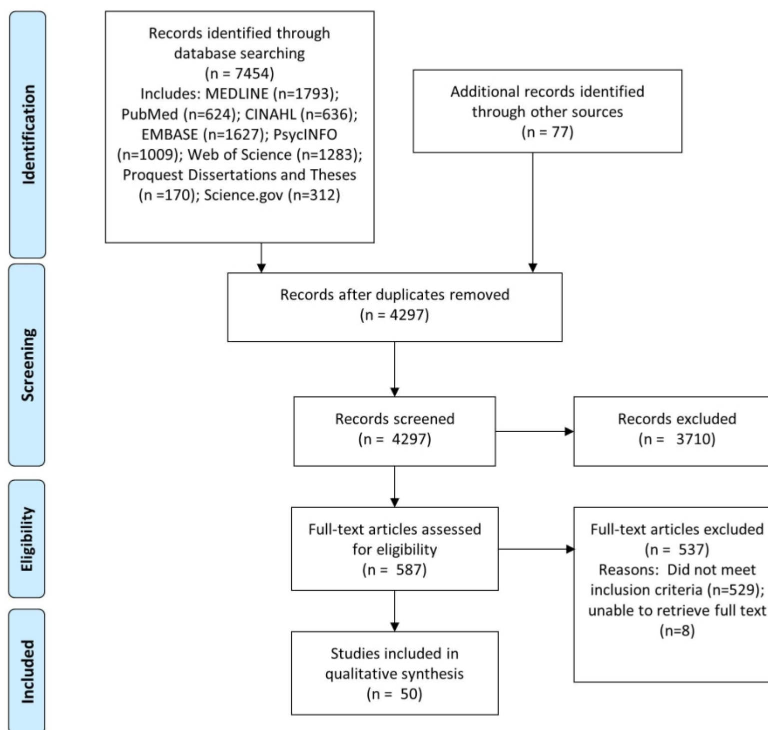

Figure 1: PRISMA diagram

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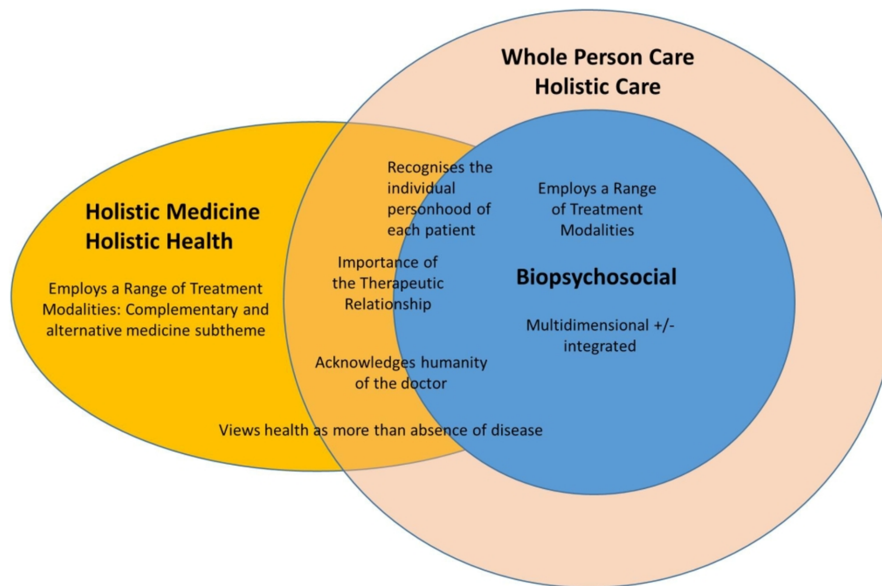

Figure 2: The interrelationship between biopsychosocial, whole person and holistic terminology

Features of each approach are included within their respective circles in the diagram. Features placed on the circles' boundaries are a minor feature of the inner circle term, but more pronounced in the outer circle/s term.
The diagram illustrates that biopsychosocial was the narrowest but most well defined of the terms, encompassing multidimensional +/- integrated care, and the use of a range of treatment modalities. Minor themes of the biopsychosocial approach include recognising the individual personhood of each patient, and viewing health as more than absence of disease. Some sources that specifically discuss the practical application of the biopsychosocial approach also emphasise the importance of the therapeutic relationship and of acknowledging the humanity of the doctor.
Holistic and whole person terminology were broader than biopsychosocial. These terms included a stronger emphasis on the therapeutic relationship, recognition of the patients' individual personhood and the humanity of the doctor, and a view of health as a state of wholeness and balance than represented in biopsychosocial care. Whole person and holistic care were essentially synonymous. "Holistic medicine"/"holistic health" were related broader terms that sometimes incorporated complementary and alternative medicine.

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APPENDIX 1: CHARACTERISTICS OF INCLUDED STUDIES

Author, Year, Country	Literature Type	Study Aim or Theme Addressed	Population Focus	Key Term	Minor Terms	Relevant Definitions	Quality
Adams (2001)[27] United Kingdom (England)	Qualitative study	"…to examine how rank-and-file GP therapists understand and explain the concept of holism in relation to both their general practice and their integration of complementary therapies therein."	28 GPs on the medical register of the cities of Edinburgh and Glasgow, who were practicing complementary therapies.	Holism	Treating the whole person	Two general understandings of holism among GP therapists: 1. Treating the "whole person" (physical, psychosocial, cultural, environmental). Includes two themes – exploration of personality and immediately observable behaviour of patient; and understanding the patient in their social/environmental context. 2. Enhancing holism: Ability to treat a broad range of problems. States that holism is not confined to complementary practice.	73%
Anandarajah (2008)[39] USA	Theoretical: Opinion piece	Suggests a theoretical framework for spirituality in WPC.	N/A	WPC	Biopsycho-sociospiritual model Holistic approach	Proposes two models, which together describe WPC. 1. Body, mind, spirit, environment, social, transcendent (BMSEST) model. 2. Head, heart, hands (3H) model.	100%
Ben-Ayre, Steinmetz & Ezzo (2013)[34] Israel	Theoretical: Case study	Presents "an integrated biopsychosocial-spiritual" approach to cancer care in context of discussing two case studies.	N/A	Holistic approach	Biopsycho-sociospiritual approach	Argues that "holism in medicine should be based on a [biopsychosocio]-spiritual paradigm, which may be interpreted repeatedly by the dynamics of the patient-physician dialogue."	92%
Borins (1984)[40] Canada	Theoretical: Opinion Piece	Argues that WPC is lost in a culture of subspecialisation, and that as a result people are seeking traditional healers/CAM.	N/A	Holistic medicine		"Holistic medicine approaches the physical, emotional, spiritual, and social aspects of a person as they relate to health and disease. It emphasizes prevention; concern for the environment and the food we eat; patient responsibility; using illness as a creative force to teach people to change; the 'physician, heal thyself' philosophy; and appropriate alternatives to orthodox medicine."	75%
Borins (1980)[14]	Book Chapter	Describes holistic health.	N/A	Holistic health/ medicine		"**Holistic Health** refers to the approach to the whole person. It is a concern for the balance of the physical, psychological, social and spiritual aspects of each person as it relates to health and disease"	50%

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Canada						(author's emphasis). "**Holistic Medicine** attempts to look beyond one-dimensional thinking to the unity of life, which includes seeing the oneness of all being and process, as well as being in harmony with the laws of nature" (author's emphasis).	
Brody (1999)[41] USA	Theoretical: Commentary	A response to a qualitative study on family physician care for native Americans.	N/A	Biopsycho-social model		Discusses that biopsychosocial model involves understanding "the social and cultural environment and the psychological impact that environment has on the individual, just as much as [biological factors]." Differentiates between the biopsychosocial model as a scientific, ethically neutral theory, and patient centred care, which includes ethical aspects and communication.	58%
Brown (2007)[42] United Kingdom (England)	Theoretical: Guest editorial	Discusses the impact of the 2004 general practice contract in the UK on the provision of the holistic approach of traditional general practice.	N/A	Holistic care		Describes a holistic approach as one "where patients are treated as individuals; mind, body, emotions and spirit and seen as part of a greater whole and includes their family, society and their environment." Also discusses practitioner self-care as a component of holistic care.	58%
Davidsen, Guassora & Reventlow (2016)[55] Denmark	Theoretical: Opinion piece	Discusses theoretical models of understanding patients' undifferentiated symptoms without a sharp body/mind divide.	N/A	Holistic care	Biopsycho-social model	Defines holism as being greater than the sum of the parts, and a holistic approach as relating to "the whole human being and the complexities of his or her cultural and social context." Discusses theoretical models including: -Psychosomatic approach -Biopsychosocial model -Balint's view and patient-centeredness -The body-mind -Bodily empathy -Mentalisation	100%
DeGruy & Etz (2010)[56] USA	Theoretical: Opinion piece	Discusses the integration of behavioural healthcare into the Patient Centred Medical Home.	N/A	WPC		Equates "care of the whole person" with comprehensiveness of care that addresses all healthcare needs by integrating care provided by other team members. Argues that WPC must include the full psychosocial dimension of care (mental healthcare, family and community contexts, substance abuse, and health behaviour change).	90%
Doherty, Baird &	Theoretical: Opinion piece	"To evaluate the progress of family	N/A	Biopsycho-social model		Argues that the biopsychosocial model is best viewed as a "metatheory." It includes biological, personal, and social components;	83%

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Becker (1987)[43] USA		medicine in incorporating [the]…biopsychosocial model of medicine into its scientific and clinical work."				as well as wider contexts (larger social and cultural units; doctor-patient relationship within the health care system). Proposes a "split biopsychosocial model."	
Ellyson (1958)[44] USA	Theoretical: Opinion Piece	Discusses treating the whole patient in general practice.	N/A	Treating the whole patient		Argues that patients must be treated as a whole, including body, mind, and soul (religious aspect). Focuses on "men of medicine" and "men of God" working together to provide care for the whole patient. Discusses the importance of physicians "setting an example of right living."	58%
Epstein (2014)[65] USA	Theoretical: Opinion piece	"…explore[s] ways in which Engel's biopsychosocial vision can be realized through building the capacities of clinicians to become more self-aware and resilient, and engage in compassionate action."	N/A	Biopsycho-social		Lists eight physician behaviours/attitudes that facilitate a biopsychosocial approach: • "From fragmented self to whole self • From othering to engagement • From objectivity to resonance • From detached concern to 'tenderness and steadiness' • From self-protection to self-suspension • From focus on well-being to focus on resilience • From empathy to compassion • From whole mind to shared mind"	83%
Epstein & Borrell-Carrio (2005)[61] USA/ Spain	Theoretical: Opinion Piece	Proposes that "habits of mind may be the missing link between a biopsychosocial intent and clinical reality."	N/A	Biopsycho-social model		Views the biopsychosocial model as "a vision and an approach to practice rather than an empirically verifiable theory, a coherent philosophy, or a clinical method." Suggests that the biopsychosocial approach should be based upon a matrix/web approach rather than a linear ordering of system levels. Discusses "habits of mind" required for a biopsychosocial approach, including "attentiveness, peripheral vision, curiosity and informed flexibility," used within appropriate context.	92%
Fortin, Hudon, Bayliss,	Theoretical: Opinion Piece	To "…review the relationship between	N/A	Caring for the whole patient		"Caring for the whole implies considering the entire person behind the symptoms within his or her life context. It also mandates focusing on the patient's *experience* of the symptoms…finding common ground	83%

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Soubhi & Lapointe (2007)[45] Canada/ USA		psychological distress and multimorbidity… and discuss a team-based approach to managing care for this complex patient population.”				with the patient and collaborating on an approach that incorporates the patient's perspective” (author's emphasis).	
Fraser-Darling (1985)[57] United Kingdom (England)	Theoretical: Reflection on case study	Reflects on a case study in which spiritual care was provided to a patient.	N/A	Holistic Care		Discusses a single element of holistic care: Spiritual care (from a Christian perspective). Describes this as involving empathy (mental, emotional, spiritual); being with the patient; avoiding being judgemental; and avoiding creating inappropriate professional distance.	42%
Freeman (2005)[18] USA	Theoretical: Opinion Piece	Discusses the definition of holism.	N/A	Holism		Briefly reviews the literature on holism, identifying understandings including complementary/alternative medicine, spirituality in health, nursing practice, and biopsychosocial medicine. Argues that “what is ‘holistic’ depends on where you stand” [ie. it is the largest scale that is relevant to you]. States that the European Academy of Teachers in General Practice/Family Medicine definition of holism (“the ability to use a biopsychosocial model taking into account cultural and existential dimensions”) is “quite a good one.” Argues that “holism does not mean ‘anything outside traditional allopathy’” and that holism is not reductionist or limited to a single therapy.	100%
Freeman & McWhinney (2016)[12] USA	Book chapter	Argues for a paradigm shift in medical thinking from biomedical to a “new paradigm.”	N/A	Holistic		A holistic approach to medicine considers it “impossible to consider any illness without reference to the patient's self…[sees] the patient as a whole, an integrated being with a history, a present, and a future that is ensconced in myriad psychological realities, social relationships, and environmental challenges, against a background of genetic propensities.”	100%
Grantham (1983)[35] Canada	Theoretical: Opinion Piece	Argues for a role for behavioural medicine as a special interest area in family	N/A	Whole person medicine Biopsycho-	(w)holistic medicine	Uses whole person and biopsychosocial medicine as synonyms. Argues that behavioural medicine is an element of these approaches. Argues that holistic medicine is a “disreputable term” due to its association with lack of professionalism, renunciation of science and	92%

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		practice, and its inclusion in medical school curricula.		social medicine		excessive entrepreneurism.	
Hepworth & Cushman (2005)[60] USA	Theoretical: Opinion piece	Discusses barriers to implementing the biopsychosocial model and proposes solutions to these.	N/A	Biopsycho-social		The biopsychosocial model involves analysing different "levels" of the "biological person in context such that each level of analysis impacts and is impacted by the others." Involves physician characteristics including thoroughness, competence, and compassion. Discusses the medical home concept as a similar term.	83%
Hermann (1989)[62] Israel	Theoretical: Opinion Piece	Advocates a "transitional model" ("split biopsychosocial model") of practice, in response to the practical difficulty of applying the biopsychosocial model.	N/A	Biopsycho-social		Argues that the biopsychosocial approach involves social, psychological, and biological knowledge and skills, however they don't necessarily need to be employed simultaneously in all encounters. Suggests a "split biopsychosocial model."	100%
Howie, Heaney & Maxwell (2004)[66] United Kingdom (Scotland)	Theoretical: Opinion Piece	Argues that patient centeredness and holism are the two concepts that best describe the core values of general practice. Discusses the Consultation Quality Index (CQI) instrument, which was designed to measure quality in relation to these values.	N/A	Holism		Defines holism as "the construction of diagnoses in biopsychosocial terms." Involves recognising and addressing relevant comorbidities; addressing preventive health; and providing continuity of care that facilitates patients revealing key personal information to the doctor. Uses "consultation length" and "how well the patient knows the doctor" as proxies for holism. States that "the biopsychosocial model is represented by the values of holism (representing the 'what') and patient-centeredness (representing the 'how')."	100%
Jimenez (2004)[36]	Theoretical: Opinion Piece	Argues that family physicians are ideally placed	N/A	Biopsycho-social		The term biopsychosocial "implies that every person has biologic, psychological and social dimensions," and perceives how systemic characteristics in society act on these factors.	67%

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Canada		to integrate research on biological and psychosocial aspects of the person.				Equates the term biopsychosocial with "a holistic view."	
Margalit, Glick, Benbassat, Cohen & Margolis (2007)[46] Israel	Mixed methods study Note: Only the initial component of the study, in which family physicians are asked to determine what types of observed behaviour constitute a biopsychosocial consultation, is included in analysis. Subsequent tool validation is excluded due to being irrelevant to the research question.	"To identify the skill components of a biopsychosocial consultation beyond those of the patient centred interview, and develop an easy-to-use tool for their measurement."	Qualitative phase: 35 family physicians (respondents from 3 email discussion groups: 19 from USA, 6 from Canada, 5 from Europe, 4 from Israel, 1 from Australia)	Biopsycho-social		Three aspects of observed physician behaviour characterise a biopsychosocial consultation: -Patient-centred interview -System-centred and family-centred approach to care -Problem-solving orientation	50%
McWhinney (1980)[28] Canada	Theoretical: Opinion Piece	Discusses the meaning of holistic medicine.	N/A	Holistic Medicine		Holistic medicine is "understanding and treating illness in its context" and is not "unorthodox." Identifies 2 misunderstandings of holistic medicine: -Giving "license to pry into any aspect of a patient's personal life" -Encouraging "the 'medicalisation' of life'"	100%
McWhinney (1997)[67] Canada	Theoretical: Editorial	Argues that family medicine "transcends the dualistic dissociation of mind and body"	N/A	Treating the whole person		"Treating the whole person" involves attending to both body and mind and recognising their interaction, rather than adopting a dualistic approach.	92%

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		and for the importance of this approach.					
Medalie (1990)[68] USA	Theoretical: Opinion Piece	"…angina pectoris is examined to validate the concept of the biopsychosocial model."	N/A	Biopsycho-social		Expands the biopsychosocial model to include "family, neighbourhood, work environment, and community… [the] physician-patient relationship and an understanding of the physician's own beliefs [and] biases…" Emphasises that the biopsychosocial model incorporates reductionism. Argues that the biopsychosocial model does not allow for changes over time.	100%
Medalie (1978)[47] USA (author from Israel)	Book chapter	Describes "the interlocking dimensions of medical practice," including levels of practice, patterns of care and team members. Presents a conceptual tool ("practice-gram") to describe the extent of family medicine and evaluate types of practice.	N/A	Whole person approach		The whole person approach "sees the complaint, problem or disease in the context of a patient with physical, emotional and social attributes which cannot be separated from each other." Proposes a three level model of family medicine, including the individual level, family level, and community level. The whole person approach forms the second layer (above "the case approach" [ie. biomedical approach]) of the individual level within this framework. The family level and community level are not included in the whole person approach, but viewed as additional levels that build on the individual level.	92%
Murray, Kendall, Boyd, Worth & Benton (2003)[37] United Kingdom (Scotland)	Qualitative study	To determine whether GPs perceive they have a role in providing spiritual care, and factors they see as barriers/ facilitators to assessing spiritual needs and providing spiritual care.	GPs treating 40 patients with life threatening illness (20 heart failure NYHA grade III-IV, 20 inoperable lung cancer).	Holistic	Whole person	Spiritual care is part of the GPs role in providing holistic care.	32%
O'Brien,	Qualitative	"To understand	19 GPs and PNs	Whole		Found that a "whole person" approach might help to manage	95%

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Wyke, Guthrie, Watt & Mercer (2011)[38] United Kingdom (Scotland)	study	general practitioners' (GPs) and practice nurses' (PNs) experiences of managing multimorbidity in deprived areas and elicit views on what might help."	from 4 practices with a high proportion of patients living in the top 15% most deprived areas of Scotland	person intervention Holistic		multimorbidity in the context of social deprivation. Components of a whole person intervention included: -Relationship -Making patients feel valued -Empowerment -Patient-centeredness -Understanding the context in which the patient manages Meaning of holism differed between GP practices: -Practice A, C, D: Taking interest in patients as people and building relationships with them; looking at patients' background and goals. -Practice B: Looking "at all the patient's conditions together." Placed limits between the medical and the social; did not view dealing with social issues as their role.	
Pauli, White & McWhinney (2000)[63] Switzerland/ USA/ Canada	Theoretical: Opinion piece/ literature review	Argues for an expansion of the biomedical model to incorporate "how each patient's experiences impinge on health status."	N/A	Biopsycho-social		Proposes a "psychosomatosociosemiotic" model that expands on the biopsychosocial paradigm and "seeks to explain why in a living, self-regulating system informational inputs are essential regulators of biological processes."	92%
Pietroni (1984)[58] United Kingdom (England)	Theoretical: Opinion Piece	Describes the principles underpinning the practice of holistic medicine, in the context of discussing the British Holistic Medical Association.	N/A	Holistic medicine		Identifies principles underlying holistic medicine: -"The whole is greater than the sum of the parts" -"The use of a wide range of medical interventions", including "orthodox approaches…whole person therapies and self-help skills…and 'alternative or complementary' methods" -"Education as well as treatment" -"Doctor-patient relationship" -"Physician heal thyself" philosophy	58%
Pietroni (1984)[29] United Kingdom (England)	Theoretical: Opinion Piece	Argues that a dualistic, mechanistic and reductionistic approach to medicine should be replaced with a monistic, humanistic and	N/A	Holistic Medicine	Whole person medicine	Principles of holistic medicine include: -Viewing the human as multidimensional (mind, body, spirit), with the whole being greater than the sum of the parts -Interconnectedness between humans and the environment -Disease resulting from imbalance -Humans' innate capacity for self-healing, with the primary task of the doctor to encourage this. This can often "be better accomplished through education than through direct intervention" -"Physician heal thyself" philosophy	92%

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		holistic approach.				In addition to physical, psychological, and social factors, holistic medicine encompasses "new" fields of science such as psycho-neuro-immunology, physics, field force, systems theory, holographic theory of brain storage mechanisms, and nature of healing and healing energies. Holistic medicine is "not just about alternative or complementary medicine."	
Pietroni (1986)[30] United Kingdom (England)	Theoretical: Editorial	Addresses the debate surrounding the use of CAM. Specifically discusses holism, and funding of CAM.	N/A	Holism		Argues that holism is based on systems theory and "the educational model of health care" and transcends any particular therapy (ie. it is not exclusive to CAM).	58%
Pietroni (1986)[48] United Kingdom (England)	Theoretical: Symposium introduction	Introduction to a symposium of articles addressing CAM in general practice.	N/A	Holistic		A holistic approach includes "a willingness to take into account several factors in the causation of the presenting problem (physical, emotional, dietary, spiritual)…willingness to use a wide range of interventions…attempts to include the patient as much as possible in his own health care and draws attention to the importance of the practitioner's own state of well-being." Argues that the holistic approach is not restricted to complementary medicine.	75%
Pietroni (1987)[16] United Kingdom (England)	Theoretical: Symposium	Discusses developments in and definitions of holistic, alternative and complementary medicine; discusses general practice incorporating some of these.	N/A	Holistic medicine		States holistic medicine involves: "Responding to the person as a whole (body, mind and spirit) within the context of his environment (family culture and ecology) Willingness to use a wide range of interventions… Participatory relationship between the doctor and patient… Awareness of the impact of the 'health' of the practitioner on the patient." Argues that holistic approach is not restricted to complementary medicine.	83%
Pietroni (1997)[31] United Kingdom (England)	Theoretical: Opinion piece	The relationship between holism and reductionism – argues that a reductionist approach to	N/A	Holistic	Whole person Biopsycho-social	Holism "is the study of the relationship between parts and the whole, ie. How parts are related to each other and come together to form a whole," and must encompass reductionism. Whole person medicine: -"Treats the whole person rather than the disease" in the context of	83%

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		"defining the parts" is an essential element of holism.				their environment -Emphasises prevention -Involves doctor attending to their own health -Is willing to use a wide range of therapies The biopsychosocial model aims to place the patient in psychological and social context. Argues that a holistic approach is not restricted to complementary medicine.	
Rabinowitz (1999)[49] USA	Book chapter	"Review[s] the development of major theories of primary care practice, with a focus on their psychosocial aspects."	N/A	Biopsycho-social		"The biopsychosocial approach, based in systems theory, sets up a vertical hierarchy of levels of interactions that could be taking place in any clinical situation, ranging from the lowest (atomic level) through molecular, tissue, organ and individual levels, and beyond this to two-person, family, community and society levels."	100%
Rabinowitz, Cullen & Feinstein (1998)[64] USA	Theoretical: Opinion piece (Commentary)	"…proposes a model of family practice, based on host/ environment interactions, that combines aspects of biomedical, biopsychosocial, and [community oriented primary care]…models applicable to the care of individual patients."	N/A	Biopsycho-social		States that the biopsychosocial model's "multi-level complexity may deny a more holistic understanding of the patient."	92%
Risdon & Edey (1999)[50] Canada	Theoretical: Opinion piece	Discusses the importance of authentic physician-patient relationships in providing holistic care.	N/A	Treat[ing] the whole patient Holistic		"'Holistic' care means considering illness along with disease widening the physician's field of vision to include personal as well as pathophysiologic elements of the patient's experience of sickness…truly holistic care consciously places the *physician* in the system." Whole patient care involves treating "mind, body, and spirit, disease and illness." Argues that holistic care involves an authentic patient-physician relationship, involving self-awareness and intentional mutuality.	66%

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Rosenblatt (1997)[59] USA	Theoretical: Opinion piece (Commentary)	Presents the ecobiopsycho-social perspective as an "expanded conceptual framework to grapple with global issues that affect individual health and the integrity and sustainability of the human community."	N/A	Biopsycho-social (specifically eco-biopsychosocial)		Expands upon the biopsychosocial model to present an "ecobiopsychosocial" perspective.	67%
Sawa (1988)[69] Canada	Theoretical: Opinion piece	"Outlines methods of incorporating the family into medical care."	N/A	Whole person medicine	Biopsycho-social model	Whole-person medicine: -"…demands a person-centred approach, but it also recognizes the 'context' or family setting of the ill person as inseparable from the healing process." -"…rejects a materialistic premise and encompasses subjective feelings and relationships, as well as the spiritual dimension. It views healing as restoring wholeness. It requires self-knowledge, moral awareness, a reflective habit of mind, and a capacity for reflective listening and for empathy." -Views the whole as greater than the sum of the parts; and results in personal growth of the physician. -"…does not integrate systems thinking into its conceptual framework." The biopsychosocial model "integrates social, psychological and biological factors in treating illness' using a systems approach."	100%
Sheldon (1989)[51] United Kingdom (England)	Theoretical: Opinion Piece	Summarises a report from the Churches' Council for Health and Healing on the Christian approach to whole person medicine.	N/A	Whole-person medicine		Emphasises the inclusion of spirituality in whole person medicine: "In an approach to medical care of the whole person it may not be enough to consider only the physical, psychological, and social aspects. These components can include emotional and volitional aspects of the person as well as his or her relationships. The whole-person approach may still be incomplete, however, if it excludes a consideration of the spiritual nature of man."	50%
Stange (2009)[52] USA	Theoretical: Editorial	"…explores an integrated way of understanding how the	N/A	Holarchy of health care		Describes a "holarchy of health care" that includes fundamental health care (psychosocial acute and chronic illness, managing patient concerns), integrated care, prioritised care and healing/transcendence.	92%

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		components of health care can work together to balance access, cost and quality."					
Stewart (1975)[32] Canada	Thesis	Aim: "…to devise a method of identifying whole person (holistic) care in the setting of family practice."	Defines holistic care by Pearson's procedure for operationalising a concept. Definition was reviewed by committee of 3 family physicians, who provided written comments, gave further opinion and weighted components of the definition Subsequent study (not analysed in this review) assessed two measures of patient care. Participants included 29 patients with chronic illness and 6 family physicians	Holistic care	WPC	Recognises that different definitions of holistic care have been offered. "Holistic care was defined as care which took account of the patient's physical, psychological and social problems. In other words, the physician viewed the patient's mind, body and environment as integral parts of his being and all these parts were taken into account in the physician's data gathering and management." Other features included: -Being "synergistic and not merely the sum of separate parts." -"…the consideration of the impact or implications of these factors on the daily life of the patient." -An understanding of human development. -"…a set of values and behaviours on the part of the physician…empathy, awareness of his own person and a neutral, non-judgemental view." -Preventive and family approach. Physicians disagreed on the relative weighting of the different components of the definition.	80%
Strandberg, Ovhed, Borgquist & Wilhelmsson (2007)[22] Sweden	Qualitative study	"…to explore the perceived meaning of a holistic view among general practitioners and district nurses."	22 GPs and 20 nurses working in primary care in two Swedish county councils. Divided into 4 GP focus groups and 3 nursing focus groups.	Holistic view		A holistic view involves: 1. Attitude: -Professional: The whole is seen as greater than the sum of the parts -Political/administrative 2. Knowledge: Factual and tacit 3. Circumstances -Motivating factor -Organisation	91%

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						-Sphere of activity (house visits) -Tool (consultation, communication)	
Sturmberg (2005)[53] Australia	Theoretical: Opinion Piece	"…describes, through a systems-based methodology, the translation of the somato-psycho-socio-semiotic understanding of health into a flexible teaching approach for students and in a postgraduate setting for registrars."	N/A	Holistic Care		Holistic care involves acquiring knowledge of the four dimensions of health and disease (somatic, psychological, social, semiotic), understanding the relationships between these components, and using this understanding to heal patients, while integrating the roles of different health care providers.	92%
Van Velden (2003)[33] South Africa	Theoretical: Opinion Piece	Describes the post-modern "holistic bio-psycho-social model," contrasting this with "the reductionalistic and scientific biomedical model of modernism."	N/A	Biopsycho-social	Holistic Whole person wellness	"…holistic health considers the whole person and how he/he interacts with the environment. Doctors become more patient-centred, rather than disease-centred…Optimal health is…the conscious pursuit of the highest qualities of the spiritual, mental, emotional, physical, environmental, occupational and social aspects of the human experience, as illustrated in the bio-psycho-social model." Features of a holistic biopsychosocial approach include: -Exploring genetic, physical, environmental, biological, social, intellectual, occupational, and spiritual aspects of health -Treating the patient in context of family and community -Entertaining subjectivity -"Person" concept replacing "disease" concept -Dialogue between doctor and patient, patient taking responsibility for their health Relates the holistic approach to post-modernism.	58%
Vogt, Hofmann & Getz (2016)[70] Norway	Theoretical: Opinion piece/ literature review	"…to analyse the concept of *holism* in P4 systems medicine, both with regard to its methods and conceptualization of health and disease."	N/A	Holistic		Argues that systems medicine (P4 medicine – predictive, preventive, personalised, participatory) "represents a *technoscientific holism* resulting from an altered, more all-encompassing technological gaze on human life and related changes in biomedicine's methods and philosophy, which points towards…*holistic medicalization* [in which]…each person's whole dynamic life process is defined in biomedical, technoscientific terms as controllable and underlain a regime of control…" (author's emphasis)	92%

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						Distinguishes between "humanistic holism" and "technoscientific holism" – "[P4 systems medicine] is not a return to the holism of humanistic medicine as in medicine that is focused on the defining capacities, subjective experience and values of whole persons. Rather, it is biopsychosocial, patient-centered and person-centered medicine – or the '*art'* of medicine – being redrawn in technoscientific terms" (author's emphasis).	
Vogt, Ulvestad, Eriksen & Getz (2014)[71] Norway	Theoretical: Opinion piece	Addresses "whether systems medicine [can] provide a comprehensive conceptual account of and approach to the patient and the root causes of health problems, and – furthermore – …[whether] such an account [can] be reconciled with the humanistic concept of and approach to the patient as a person."	N/A	Holistic		Argues that "systems medicine as currently envisioned cannot be said to be integrative, holistic, personalised or patient-centred in a humanistic sense," but must be "complemented with other methods."	92%
Wun (2002)[54] Hong Kong	Theoretical: Opinion Piece	"…proposes and discusses a simplified definition [of general practice or family medicine]: a general practitioner (GP) is a physician who personally provides whole person health care to individuals and families in their	N/A	WPC		Distinguishes between whole person and holistic care. Holistic care is "the cross-sectional view of a person at a certain point in the lifespan," whereas WPC "is the accumulation of many instances of holistic care throughout the lifetime", including care for multiple systems/organs.	92%

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		living environment."					

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ENTREQ Checklist (Enhancing Transparency in Reporting the Synthesis of Qualitative Research)[1]

No	Item	Description	Page
1	Aim	State the research question the synthesis addresses.	3
2	Synthesis methodology	Identify the synthesis methodology or theoretical framework which underpins the synthesis, and describe the rationale for choice of methodology (e.g. meta-ethnography, thematic synthesis, critical interpretive synthesis, grounded theory synthesis, realist synthesis, meta-aggregation, meta-study, framework synthesis).	4
3	Approach to searching	Indicate whether the search was pre-planned (comprehensive search strategies to seek all available studies) or iterative (to seek all available concepts until they theoretical saturation is achieved).	3
4	Inclusion criteria	Specify the inclusion/exclusion criteria (e.g. in terms of population, language, year limits, type of publication, study type).	3-4
5	Data sources	Describe the information sources used (e.g. electronic databases (MEDLINE, EMBASE, CINAHL, psycINFO, Econlit), grey literature databases (digital thesis, policy reports), relevant organisational websites, experts, information specialists, generic web searches (Google Scholar) hand searching, reference lists) and when the searches conducted; provide the rationale for using the data sources.	3
6	Literature search	Describe the literature search (e.g. provide electronic search strategies with population terms, clinical or health topic terms, experiential or social phenomena related terms, filters for qualitative research, and search limits).	3-4
7	Study screening methods	Describe the process of study screening and sifting (e.g. title, abstract and full text review, number of independent reviewers who screened studies).	4
8	Study characteristics	Present the characteristics of the included studies (e.g. year of publication, country, population, number of participants, data collection, methodology, analysis, research questions).	Appendix 1
9	Study selection Results	Identify the number of studies screened and provide reasons for study exclusion (e,g, for comprehensive searching, provide numbers of studies screened and reasons for exclusion indicated in a figure/flowchart; for iterative searching describe reasons for study exclusion and inclusion based on modifications to the research question and/or contribution to theory development).	5, Figure 1
10	Rationale for appraisal	Describe the rationale and approach used to appraise the included studies or selected findings (e.g. assessment of conduct (validity and robustness), assessment of reporting (transparency), assessment of content and utility of the findings).	4
11	Appraisal items	State the tools, frameworks and criteria used to appraise the studies or selected findings (e.g. Existing tools: CASP, QARI, COREQ, Mays and Pope ; reviewer developed tools; describe the domains assessed: research team, study design, data analysis and interpretations, reporting).	4
12	Appraisal process	Indicate whether the appraisal was conducted independently by more than one reviewer and if consensus was required.	4
13	Appraisal	Present results of the quality assessment and indicate which articles, if any, were weighted/excluded based on the	4,

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	results	assessment and give the rationale.	Appendix 1
14	Data extraction	Indicate which sections of the primary studies were analysed and how were the data extracted from the primary studies? (e.g. all text under the headings "results /conclusions" were extracted electronically and entered into a computer software).	4
15	Software	State the computer software used, if any.	4
16	Number of reviewers	Identify who was involved in coding and analysis.	4
17	Coding	Describe the process for coding of data (e.g. line by line coding to search for concepts).	4
18	Study comparison	Describe how were comparisons made within and across studies (e.g. subsequent studies were coded into pre-existing concepts, and new concepts were created when deemed necessary).	4
19	Derivation of themes	Explain whether the process of deriving the themes or constructs was inductive or deductive.	4
20	Quotations	Provide quotations from the primary studies to illustrate themes/constructs, and identify whether the quotations were participant quotations or the author's interpretation.	5-10
21	Synthesis output	Present rich, compelling and useful results that go beyond a summary of the primary studies (e.g. new interpretation, models of evidence, conceptual models, analytical framework, development of a new theory or construct).	5-10, Figure 2

Reference:

1. Tong A, Flemming K, McInnes E, et al. Enhancing transparency in reporting the synthesis of qualitative research: ENTREQ. *BMC Med Res Methodol* 2012;12(181)

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