Abstract
Introduction: General practitioners are considered as a main resource of any health system. The performance of General practitioners significantly affects public health. Job satisfaction is affected by numerous factors. The aim of the article is to synthesize the literature studying the factors associated with physician satisfaction.
Methods: Two databases including Scopus and Pubmed were searched. Primary research studies were included only if they reported on the provision of factors affect general practitioners’ job satisfaction. All studies except systematic reviews were also excluded. Quality assessment of the systematic reviews included in the umbrella review evaluated by the assessing the methodological quality of systematic reviews tool checklist for systematic reviews.
Results: Factors affecting physicians’ job satisfaction are divided into five groups. Personal Factors: (Health status, Work family conflict, Life satisfaction), Demographic Factors: (Age, Gender, Marital status, Race), Practice factors: (Years of experience, Getting responsibility and recognition for work, Patient characteristics, Being a foreign/internationally trained doctor), Organizational factors,: (Autonomy in the work, Task delegation, Working conditions, Working hours, workload, Diversity of work, relations and contact with colleagues, Being involved in teaching medical students, Administrative burdens, Work environment, Non-financial incentives, Work engagement, Hospital type and structure, Management and leadership, Opportunity for professional development, Access to resources), Financial and economic factors (Payment methods, Income). Physician satisfaction is a dynamic entity related to both personal-related and job and work-related factors.
Conclusion: This review supports the understanding of the factors influence job satisfaction as an essential factor leads to better health outcomes.
Keywords: Physicians, General practitioners, Career satisfaction, Job satisfaction, Systematic review

Introduction
General practitioners (GPs) are considered as a main resource of any health system, the performance of whom significantly affects public health (1). Since GPs play an important role in directing other medical inputs, their decisions dramatically affect the quantity, quality, and cost of health care (2). In their daily practice, they face numerous physical, mental, social, and intellectual challenges (3). Thus, physicians’ satisfaction is an important criterion for measuring their health (4).

Job satisfaction is referred to as the difference between one’s expectations and experiences. It can also be defined as the individual’s interest in his/her job or as a set of his attitudes about various aspects of the job (5). For determining the physician’s satisfaction, three aspects should be taken into account: satisfaction with the current job (3); satisfaction with the content of the work done (4); and satisfaction with the overall job path over time (3). Job satisfaction may affect the physician’s prescriptions, his/her adherence to medication, patient’s satisfaction, and quality of care (6).

Physicians’ dissatisfaction imposes a negative burden not only on themselves but also on policymakers, and can have several consequences as well (7). There are different factors based on which we determined if a GP suffers from burnout, one of which is the amount of stress experienced during job (8). Job satisfaction is affected by numerous factors, including personal (9), occupational, workplace-related, economic, and non-economic factors (9-12).

Many studies have been carried out on job satisfaction in different countries. Job satisfaction is an ambiguous concept including a variety of aspects (13).
Therefore, this study aimed to determine which factors affect GP job satisfaction. Increased job satisfaction not only has a close relationship with patient’s well-being and care but also decreases the risk of burnout. Being aware of various aspects of job satisfaction is of great importance for healthcare managers and policy-makers in order to improve the physicians’ motivation, professional development, and retention (1).

**Methods**

On December 2019, two databases, Scopus and PubMed Library, were searched; the search was restricted to English language and systematic review literature papers published from January 2000 to January 2020. The database specific search included the following algorithm for PubMed: (((doctor* [Title/Abstract] OR practitioner*[Title/Abstract] OR physician*[Title/Abstract])) AND satisfaction [MeSH Major Topic]) OR satisfaction [Title/Abstract]) Filters: Systematic Reviews; Humans. The database specific search included the following algorithm for Scopus: TITLE (doctor* OR practitioner* OR physician*) OR ABS (doctor* OR practitioner* R physician*) AND TITLE (satisfaction) OR ABS (satisfaction) AND (LIMIT TO (DOCTYPE, "re")) (Table 1). The initial search retrieved 5013 different articles. 202 duplicate articles were excluded. Based on the title and abstract, 35 full-text articles were eligible for further assessment; ultimately, 8 articles were included in the review. The full process is described in the PRISMA flow chart (Figure 1). Two independent researchers

<table>
<thead>
<tr>
<th>Table 1: Search strategies</th>
<th>Data base</th>
<th>Search query</th>
<th>Number of retrieved articles</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>PubMed</td>
<td>(((doctor* [Title/Abstract] OR practitioner*[Title/Abstract] OR physician*[Title/Abstract])) AND satisfaction [MeSH Major Topic]) OR satisfaction [Title/Abstract]) Filters: Systematic Reviews; Humans</td>
<td>2840</td>
</tr>
<tr>
<td></td>
<td>Scopus</td>
<td>(TITLE (doctor* OR practitioner* OR physician*) OR ABS (doctor* OR practitioner* R physician*) AND TITLE (satisfaction) OR ABS (satisfaction)) AND (LIMIT TO (DOCTYPE, &quot;re&quot;))</td>
<td>2173</td>
</tr>
</tbody>
</table>

![Figure 1: Preferred Reporting Items for Systematic Reviews (PRISMA) flow diagram](image-url)
(M.J and S.D) screened eligible articles based on title and abstract. Disagreements were resolved through discussion. Articles were considered relevant if the main focus was on factors related to General Physicians’ job satisfactions. Only the publications in English which were systematically reviewed were included. The studies concerning other specialties were excluded because our review focused on GPs. The full texts of all studies identified as potentially relevant were then assessed for inclusion independently by the same two authors. Discrepancies or disagreements were resolved through discussion.

For the systematic review, a more specific application of the eligibility criteria was employed: primary research studies were included only if they reported on the provision of the factors which affect general practitioners’ job satisfaction. All studies except systematic reviews were also excluded. Quality

### Table 2: Characteristics of the studies included in the analysis

<table>
<thead>
<tr>
<th>First Author, year</th>
<th>Study zone</th>
<th>Search period</th>
<th>Articles included</th>
<th>Factors</th>
<th>Amstar Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Helle Riisgaard/ 2016</td>
<td>Australia, UK</td>
<td>From inception until November 2015</td>
<td>4 studies</td>
<td>task delegation, autonomy in the work.</td>
<td>High quality</td>
</tr>
<tr>
<td>Alicja Domagała/ 2018</td>
<td>12 European countries: Germany, Netherlands, Sweden, Finland, Poland, United Kingdom, Greece, Hungary, Italy, France, Austria and Spain</td>
<td>January 2000 – January 2017</td>
<td>24 studies</td>
<td>age, gender, years of experience, specialty, working conditions, working hours: part time, full time, payment methods.</td>
<td>Moderate quality</td>
</tr>
<tr>
<td>Irene Van Ham/ 2006</td>
<td>USA, UK, Ireland, Australia, Scotland, New Zealand, Israel</td>
<td>From 1990 – July 2006</td>
<td>24 studies</td>
<td>Factors increasing job satisfaction which were: diversity of work, relations and contact with colleagues, being involved in teaching medical students. Factors decreasing job satisfaction were: low income, too many working hours, administrative burdens, heavy workload, lack of time, and lack of recognition.</td>
<td>Moderate quality</td>
</tr>
<tr>
<td>Alicja Domagała/ 2018</td>
<td>EU countries</td>
<td>January 2000 – January 2017</td>
<td>61 Studies</td>
<td>Personal Factors: (Age, Years of experience/practice, Marital status or having a partner, Work-family conflict, Health status, Life satisfaction, Coping strategies/psychological construct, Being a foreign/internationally trained doctor), Intrinsic Factors: (Specialty, Patients interactions, Work engagement), Workplace Related: (Hospital type and structure, Management and leadership, Opportunity for professional development, Colleague support, Access to resources), Job Related: (Workload and job demands, Work control, Work stability, Being a chief, Income and non-financial incentives), others: (Intention to leave, Prior achievement).</td>
<td>Moderate quality</td>
</tr>
<tr>
<td>Ruth Leibowitz/ 2003</td>
<td>UK, Australia, Denmark, Ireland, Canada and the USA</td>
<td>Since 1976</td>
<td>-</td>
<td>rapid growth in telephone triage, Medical workload, costs</td>
<td>Moderate quality</td>
</tr>
<tr>
<td>Rabab Rizvi/ 2012</td>
<td>UK</td>
<td>From 1980 – February 2017</td>
<td>30 Studies</td>
<td>age, gender, race, specialty, work environment, practice and patient characteristics, income, Physician burnout</td>
<td>Moderate quality</td>
</tr>
<tr>
<td>Danielle Scheurer/ 2009</td>
<td>US</td>
<td>From 1970 - 2007</td>
<td>97 Studies</td>
<td>Age, specialty, job demands, job control, collegial support, income, and incentives</td>
<td>Moderate quality</td>
</tr>
</tbody>
</table>
assessment of the systematic reviews included in the umbrella review was done by evaluating the methodological quality of systematic reviews tool (AMSTAR) Checklist for Systematic Reviews (Table 2).

**Results**

There were 27 systematic reviews extracted, but only 8 articles were included. The final articles were published in European countries, the United States, and Australia. Other characteristics of the included studies are presented in Table 2. Final articles were evaluated by assessing the methodological quality of systematic reviews tool (AMSTAR) Checklist for Systematic Reviews. According to the assessment, two reviews were high in quality, and the rest of them were moderate in quality.

Based on the factors extracted, a framework was developed for GPs’ job satisfaction, in which the factors had a significant relationship with physicians’ job satisfaction; they were classified into five groups as follows (Figure 2 ??):

1. **Personal factors:** health status (one study), work-family conflict (one study), and life satisfaction (one study) (9)
2. **Demographic factors:** age (5 studies) (3,4,6,7,9), gender (2 studies) (3,6), marital status (2 studies) (4,9), and race (one study) (6)
3. **Practice factors:** years of experience (2 studies) (3,9), getting responsibility and recognition for work (one study) (4), patient characteristics (one study) (6), being a foreign/internationally trained doctor (one study) (9), having participated in teaching medical students (one study) (8), working hours (2 studies) (3,8), and workload (3 studies) (4,5,8)
4. **Organizational factors:** autonomy in work (one study) (13), task delegation (one study) (3), working conditions (one study) (3), diversity of work (one study) (8), relationship with colleagues (2 studies) (8,9), administrative burdens (one study) (8), work environment (one study) (6), non-financial incentives (one study) (9), work engagement (one study) (6), hospital type and structure (one study) (9), management and leadership (one study) (9), opportunity for professional development (one study) (9), and access to resources (one study) (9)
5. **Financial and economic factors and payment methods (one study) (9)

Given that values can vary among general practitioners, a higher satisfaction rate could be observed when their work was completely viable with their own values (4). GPs were supposed to help people, deal with them, and do the expected job perfectly (2). Their acceptable well-being was associated with their satisfaction, especially if they were females (4, 6). Furthermore, not smoking and not being overweight were associated with higher GPs’ satisfaction as well (4). General practitioners who reported their well-being status as magnificent had higher job satisfaction than those who encountered resting problems (6).

**Discussion**

Research indicated that Italian female GPs were less satisfied with their job than the male ones because they experienced significant degrees of nervousness, sadness, and mental issues than males (1). In addition, some studies carried out in Europe revealed that male GPs had greater job satisfaction than their female colleagues (6).

It can be stated that being older and having great well-being positively affected job satisfaction. According to studies, older and experienced physicians were more likely to be satisfied with their job than their younger GPs (4). Female GPs, particularly the younger ones, had lower degrees of job satisfaction due to the substantial and mental bleakness they faced (1). It was additionally stated that job satisfaction was higher among the GPs with a desirable well-being status who did not report resting issues compared to the those who encountered dozing problems (4).

According to several studies, there was a relationship between job satisfaction, gender, and years of experience. As stated, male physicians with 20 years of experience were less satisfied than female ones with the same years of experience and male and female colleagues with 10 years of experience (6). Studies also showed that the years of experience had a positive relationship with GPs’ job satisfaction (6).

Another factor affecting the GPs’ job satisfaction was efficient doctor-patient relationships (2). The higher the patients’ general satisfaction with treatment, the more satisfied the doctors would be (6). The extraordinary doctor-patient relationships along with feeling helpful would make GPs satisfied. Policy makers should notice that doctor-patient relationship and variety in work are the most appealing components and the most attractive and influential factors in the career (2).

Another significant factor increasing the GPs’ job satisfaction was adaptability in working hours and the power to choose the workload. Long working hours made GPs and their families unsatisfied with the job (4). Thus, it could be said that a hefty responsibility, extended working hours, and often accessibility would unfavorably influence job satisfaction (7).

Having the chance to take responsibility as well as
having a positive mental self-view and acknowledgment for the work embraced were significant variables affecting job satisfaction. Furthermore, being part of the community was another important factor. GPs in smaller communities were slightly more satisfied with their responsibilities and the recognition they received for good work (2).

The physicians were more satisfied when working in private organizations as well as trusted associations with great administration and authority techniques, having proficient independence and work strength, being admitted to innovation and assets to give care, having an influential position, being open for proficient turn of events, being supported, receiving non-monetary impetuses, and working in small groups (2, 6).

Since the physicians needed to work with partners, there was a significant relationship between their associations with different GPs and hospitals. Studies showed that higher acknowledgment, positive groups, and support from partners were associated with higher rates of job satisfaction, and the GPs working in more modest groups experienced higher levels of job satisfaction as well (4).

General physicians needed to have the opportunity to pick their work techniques to have job satisfaction (6). In an investigation, an American GP stated: “It’s a method of having freedom and doing what I want” (4).

Less occupation variation could also change the degree of job satisfaction by, for example, eliminating crisis care from the GPs’ errands. This could possibly be examined before any progressions in the assignment of the GPs (9).

Another important factor that needed to be addressed was income expectations. Motivating force projects had to reflect work quality instead of quantity (8), and if the GPs’ payments were reasonable, their job satisfaction would certainly increase (14). There were different factors frustrating the relationship between genuine pay and job satisfaction, some of which were work hours and low maintenance status. However, satisfaction with payments seemed to be related to general satisfaction (8). The GPs liked to be associated with their installment technique. According to a Canadian report, rural physicians preferred the fee-for-service method, while the urban ones supported blended or fixed payment schemes (4). The GPs working in rural areas were happier with their income than the ones in urban areas (4).

It is really important for GPs to have decent income. However, those with higher income are less satisfied because of their hefty responsibilities. Thus, making a balance has become a challenge. This important issue can be addressed from a negative perspective when overwork leads to burnout, or from a positive perspective when the workload and income are appropriate. A good work-life balance can definitely increase the GPs’ job satisfaction, and policy makers should not force GPs to change their personal choice of workload and income balance (2).

Conclusion

Physician’s satisfaction is a dynamic parameter associated with both physician-related and job-related factors. It seems that job satisfaction is increased by the aspects concerning the occupation content, and is decreased by the aspects related to employment conditions. The factors affecting job satisfaction can be divided into five categories including Personal Factors (Health status, Work-family conflict, Life satisfaction); Demographic Factors (Age, Gender, Marital status, Race); Practice factors: (Years of experience, Getting responsibility and recognition for work, Patient characteristics, Being a foreign/internationally trained doctor); Organizational factors (Autonomy in work, Task delegation, Working conditions, Working hours, workload, Diversity of work, relations with colleagues, Being involved in teaching medical students, Administrative burdens, Work environment, Non-financial incentives, Work engagement, Hospital type and structure, Management and leadership, Opportunity for professional development, Access to resources); and Financial and economic factors (Payment methods).

In brief, it is very important to take the above-mentioned factors into consideration in order to increase general physicians’ job satisfaction.

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Authors’ Contribution

M.B., Z.K., S.D and M.J. designed the study. S.D and M.J. screened eligible articles for inclusion in the study. M.B and M.J. drafted the manuscript and designed the figures. M.B. and Z.K. supervised the work. All authors discussed the results and commented on the manuscript.

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Ethics Approval and Consent to Participate
This article was approved by the ethics committee of Shiraz University of Medical Sciences, with the code of IR.SUMS.REC.1398.1235.

Availability of Data and Materials
The datasets generated during the current study are available in the Pubmed and Scopus databases.

Conflict of Interest: None declared.

References