Table 2 Barriers and facilitators to SDM in Eastern Mediterranean Region (12–28,30)

1. Participants factors

1.1 Physicians' factors

1.1.1 Physicians characteristics	1.1.2 Knowledge and experiences	1.1.3 Physicians' perceptions
Age (bar & fac) Gender (bar & fac) Position (bar & fac) Language (bar)	Years of experience (bar & fac) Differences in using SDM as usual approach (bar & fac) Comfort level with shared approach (bar & fac)	Patient engagement is not important (bar) There is no room for SDM in our culture (bar) Patients are unlikely to weigh different treatment options (bar) Patient involvement decrease trust in physicians (bar) Expectations in health care outcomes (bar & fac)

1.2 Patients' factors

1.2.1 Knowledge and experiences	1.2.2 Patients' perceptions	1.2.3 Patients' preferences
Clinical knowledge (bar & fac) Level of education (bar & fac) Lack of knowledge about their right for sufficient information (bar) Unfamiliar with their rights in decision making (bar) Unfamiliar with the principles of decision making (bar) Financially depend on their family (bar)	Consider a consent as a form of participation (bar) Perceptions about physicians' abilities in diagnosis (bar & fac) Perceptions about physicians' caring about patients' budget (bar & fac) Providers are uncooperative or not willing to listen to patients (bar) Patients do not see themselves as decision-makers (bar)	Preferences for participation (bar & fac) Preferences for taking responsibility (bar & fac) Preferences for obtaining information (bar & fac) 1.2.4 Patients' characteristics Sex (bar & fac) Age (bar & fac) Unmarried female (bar) Unemployed (bar) Health condition (bar & fac)

1.3 Family' factors

1.3.1 Degree of involvement	1.3.2 Families' attitudes
Accompany patients at the consultation (fac & bar) Over-riding the process of decision-making (bar)	Families' fears of patients' reaction to diagnosis (bar) Families' beliefs in their responsibility for the treatment decision (bar) Delays in informing their patients about the diagnosis (bar) Families usually come together to discuss the decision and finalize it (bar)

2. Consultation factors

2.1 Relationship between participants	**2.3 Evaluating preferences**	**2.5 Introducing options**
No effort to interact or build relationship with the patients (bar) Respectful behaviour from physicians (bar & fac) Emotional support from physicians (bar & fac) Providing physical comfort for patients (fac) Providing an opportunity to discuss Patients' problem (bar & fac) Passive role in communicating with providers during the visits (bar) Providers and their roles are known by their patients (fac) Cultural influences on the way of greeting and interaction (bar) Trust in providers (bar & fac)	Considering patients' preferences (bar & fac)	Introducing options (bar & fac) Physicians lead patients to use specific treatment (bar) Patients ask for a certain treatment (bar)
2.2 Engaging patients	**2.4 Decision making**	**2.6 Providing information**
Degree to which physicians involve patients (bar & fac) Patients' satisfaction with the degree of being involved (bar & fac) Provider make patients feel they are partners (fac) Consider patients' conditions (fac) Initiating a discussion with patients about participating in decision making (fac) Physicians clarify the necessity of making a medical decision (fac)	Physicians select the final decision alone (bar) Decision-making takes place in the presence or absence of the patient (bar) Consider patients' rights to choose a treatment (fac) Disagreement on treatment proceeding (bar) Patients seek a second medical opinion abroad (bar) Patients share the decision with more than 1 family member (bar) Agreement between family members on the decision (bar) Patients' emotional readiness for decision-making (fac) Patients want their doctor to make the decision (bar) Patient want their family to make the decision (bar)	Providing sufficient information for the treatment (bar & fac) Help patients to understand all useful information (fac)

Table 2 Barriers and facilitators to SDM in Eastern Mediterranean Region (12–28,30) *(Concluded)*

3. Healthcare system factors	
3.1 Time constraints	**3.3 Organizational characteristics**
Consultation time (bar & fac) Use expert teams or trained nurses to overcome the problem of time shortage (fac) Providing decision tool at the time of patients' admission to allow adequate time to decide (fac)	Type of hospital (bar & fac) Specialists per capita (bar) Workloads (bar)
3.2 Continuity of care	**3.4 Health care resources**
Not recognizing the patients (bar) Providers address and refer to patient directly (fac) Staffing changes (bar)	Lack of an evaluation system for patients' and physicians' rights in decision-making (bar) Lack of training in the field of SDM (bar) Creating incentives (fac) Provide appropriate role model among medical instructors (fac) Acculturate people through public media to the use of decision tools (fac) Increase physicians' skills and awareness in assessing patients' expectations of the treatment (fac) Increase patients' knowledge to demand their rights (fac) Consider cultural influences when developing awareness tools (fac) Design decision tools that suit any level of education (fac) Improving physicians' interactive skills (fac) Presenting existing information in educational CD formats instead of handbooks (fac) Developing the consent forms to include all sufficient information (fac)

bar = barrier; fac = facilitator; SDM = shared decision-making.

17,20–23). Five studies reported physicians' perceptions, attitudes and experiences (*24–28*). Four studies explored experiences, perceptions and preferences of both patients and clinical staff (*29–33*).

In terms of the aims of the studies, two sought to determine physicians' and patients' perspectives on barriers to and facilitators of the use of patient decision aids (*27*, *29*). Two other studies assessed the role of family members in treatment decision-making and factors that influenced that decision (*18*,*19*). The other studies reported on factors influencing physicians' and patients' preferences with regards to SDM. Only one study explored the process of decision-making by physicians and their patients during consultations (*33*).

Fifteen studies used a quantitative approach (mainly involving questionnaires). A qualitative approach was used in two studies (*26*,*29*) and in one thesis (*33*). A mixed-methods approach was used in another thesis (*30*).

Quality assessment

All of the included studies performed well in MMAT except for two that performed moderately (*31*,*32*). The qualitative and mixed-methods studies met all of their criteria. However, the majority most of the quantitative studies were limited by use of convenience or purposive sampling techniques or small sample size (See Supplement 2).

Discussion

This review identifies several influential factors for SDM in the Eastern Mediterranean Region that include physician, patient and family member perspectives. These factors span the individual participant's role in decision-making, current SDM practices during clinical consultations, and SDM at the system level. However, the studies were from only seven countries. This indicates that SDM is not widely practised in countries in the Region as most developing countries have not integrated the concept of person-centred care into their health systems (*34*).

Unsurprisingly, patient and physician characteristics, such as their prior knowledge, experience and perceptions of SDM, and preferences towards it, are influential in determining whether it is practised. However, the practice of SDM is also affected by the attitudes of family members and the degree of their involvement in the decisions. These factors affect the interactions between the physicians and patients, as well as the consultation process including patient engagement, information provision and option sharing, elicitation and evaluation of patient preferences, and eventual decision-making. System-level factors also play a part such as time pressures, availability of healthcare resources to support SDM, and the degree of continuity of care provided. Figure 2 represents the relationship between these factors.

The most frequently cited factor was patients' level of education. Similar findings were previously reported in other studies from western countries (*35*,*36*). Patients' age was also a determinant in the Region, with a notable preference for a passive role with increasing age. Although this mirrors a study from Japan (*47*), this age factor is not consistent worldwide. For example, one American study found that older people wanted to share their medical decisions or make their own (*37*). In the Region, older patients may lack clinical knowledge and have lower levels of education overall, which may explain the tendency towards adopting passive roles in decision-making (*4*,*18–20*).