

# Women's autonomy in health care decision-making in developing countries: a synthesis of the literature

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**Abstract:** Autonomy is considered essential for decision-making in a range of health care situations, from health care seeking and utilization to choosing among treatment options. Evidence suggests that women in developing or low-income countries often have limited autonomy and control over their health decisions. A review of the published empirical literature to identify definitions and methods used to measure women's autonomy in developing countries describe the relationship between women's autonomy and their health care decision-making, and identify sociodemographic factors that influence women's autonomy and decision-making regarding health care was carried out. An integrated literature review using two databases (PubMed and Scopus) was performed. Inclusion criteria were 1) publication in English; 2) original articles; 3) investigations on women's decision-making autonomy for health and health care utilization; and 4) developing country context. Seventeen articles met inclusion criteria, including eleven from South Asia, five from Africa, and one from Central Asia. Most studies used a definition of autonomy that included independence for women to make their own choices and decisions. Study methods differed in that many used study-specific measures, while others used a set of standardized questions from their countries' national health surveys. Most studies examined women's autonomy in the context of reproductive health, while neglecting other types of health care utilized by women. Several studies found that factors, including age, education, and income, affect women's health care decision-making autonomy. Gaps in existing literature regarding women's autonomy and health care utilization include gaps in the areas of health care that have been measured, the influence of sex roles and social support, and the use of qualitative studies to provide context and nuance.

**Keywords:** women's autonomy, health decision-making, developing country, reproductive health, health care utilization

## Introduction

Women's ability to attend to their health and utilize health care facilities appropriately may depend in part on their decision-making autonomy. In many societies, especially in developing or low-income countries, the status of women often limits their autonomy and ability to make decisions about many aspects of their own lives. Many such societies still have strong social structures that rigidly define the roles of men and women, usually encoded in religious, tribal, and social traditions. These constraints often define the circumstances under which women have or do not have autonomy to make decisions regarding their own health. In the literature on maternal health, women's decision-making ability regarding use of health services is often discussed using the concept of autonomy.<sup>1</sup> Despite significant philosophical literature devoted

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to the concept of autonomy, no univocal meaning of the concept exists.<sup>2</sup> Similarly, although women's autonomy is widely referred to in many studies, especially about reproductive issues, there is no single widely accepted definition that represents the multiple dimensions of autonomy.<sup>1</sup> Dyson and Moore,<sup>3</sup> for example, define autonomy as the technical, social, and psychological ability to obtain information and to use it as the basis for making decisions about one's private concerns and those of one's intimates. Basu<sup>4</sup> defined women's autonomy as the capacity and freedom to act independently, for example, the ability to go places, such as health facilities or the market, or to make decisions regarding contraceptive use or household purchases alone and without asking anyone's permission. Mason<sup>5</sup> also defined autonomy as women's ability to make and execute independent decisions pertaining to personal matters of importance to their lives and their families. Some studies show that women with greater autonomy are more likely to seek health care for themselves<sup>6</sup> and use different forms of health care services available to them.<sup>7,8</sup>

Studies have also shown that increased female autonomy confers benefits such as long-term reduction in fertility, higher child survival rates, and allocation of resources in favor of children in the household.<sup>9</sup> To further examine the relationship between women's autonomy in developing countries and their ability to make health care decisions, as well as the influence of sociocultural and other characteristics on women's autonomy, we reviewed published empirical literature about health care decision-making among women in developing countries, with special interest in the description and measurement of autonomy. Specifically, the aim of this review was to describe 1) definitions and methods that studies have used to measure women's autonomy in developing countries, 2) the relationship between women's autonomy and their health care decision-making and utilization across a range of health care, and 3) factors that influence women's autonomy and decision-making regarding health care.

## Materials and methods

### Sources of information

All studies were found by searching through the electronic database (PubMed and Scopus). Additional searches were conducted of the gray literature using Google Scholar, and relevant articles were included in the review. Following the identification of relevant articles, the reference lists of articles identified were searched to locate relevant publications not indexed in the database.

### Search strategy

The following search terms were used to search all databases to identify research studies from developing countries: "autonomy", "decision-making", "decision-making autonomy", "women's autonomy", "women's health", "female", "health", "clinical", "hospital", "disease", "developing countries", "low and middle income countries", "underdeveloped", "Africa", "sub-Saharan", "reproductive health", "third world", and "maternal health services". The exact search strategy using MeSH terms for PubMed and Scopus is described in detail in the Supplementary materials.

### Study selection and data extraction

The process of study selection and extraction is presented in a PRISMA flow chart in Figure 1. The search returned 377 publications from PubMed (157), Scopus (180), Google Scholar (28), and the reference list of identified articles (12). After removing duplicates, 368 studies remained. After screening titles and abstracts for relevance, ie, studies presenting data (including primary and secondary data) were included if they evaluated and reported women's autonomy in health care decision-making or decision-making as a function of autonomy, 348 studies were excluded. Therefore, 20 full texts were assessed, and then three additional studies were excluded because they were reviews or commentaries. A final set of 17 articles were included in the review. A quality assessment of the included studies was not done because our aim was to synthesize the literature rather than summarize the estimates of an effect size derived from a systematic review.

### Inclusion criteria

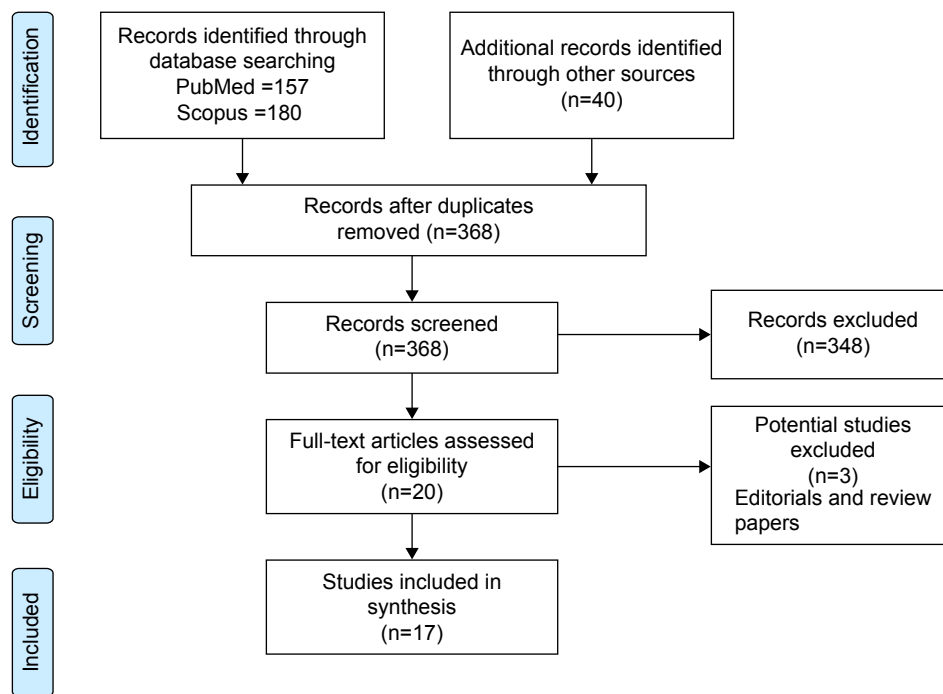
Studies were included in the review if they met the following criteria:

1. Publication in English
2. Original articles
3. Investigations on women's decision-making autonomy about health and health care utilization
4. Developing or low-income country context.

## Results

### Characteristics of reviewed articles

Most (eleven) of the studies were conducted in South Asia, five in Africa, and one in Central Asia. Only one study utilized a combination of quantitative and qualitative methods of data collection, while the remaining 16 used quantitative methods. Regarding data source, the majority (12) used secondary data from their countries' national demographic and health surveys, and five collected primary data. Most studies (14 of 17) focused on women's decision-making autonomy in



**Figure 1** Summary of search strategy.

**Note:** Based on the PRISMA statement template from Moher D et al.<sup>47</sup>

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

respect to maternal/reproductive health care utilization, and three investigated women's decision-making about health care more broadly (Table 1).

## Definition and assessment of autonomy and decision-making

Twelve of the 17 articles defined women's autonomy using definitions from prior authors and literature, two had study-specific definitions, and another three did not report a definition of autonomy (Table 2). The majority adopted definitions proposed by Dyson and Moore<sup>3</sup> or Basu.<sup>4</sup> For example, five studies<sup>10–14</sup> used Dyson and Moore's<sup>3</sup> definition alone, which defined autonomy as the "ability – technical, social, and psychological – to obtain information and to use it as the basis for making decisions about one's private concerns and those of one's intimates." Two studies<sup>7,15</sup> used a combination of the definition of Dyson and Moore<sup>3</sup> and Basu,<sup>4</sup> defining female autonomy as "the capacity to manipulate one's environment through control over resources and information for personal interest." Five studies<sup>1,6,16–18</sup> combined aspects of Dyson and Moore<sup>3</sup> and Basu's<sup>4</sup> definitions with other previously published definitions.<sup>9,19–24</sup> Senarath and Gunawardena<sup>25</sup> used a study-specific definition of women's autonomy specifically related to health care and household decisions as "the proportion of women who make the decision either alone or jointly with husband or someone else," while Allendorf<sup>26</sup> defined

autonomy as "women's opportunity to make choices that affect their lives."

Nine of the papers had study-specific measures of female autonomy. Most of these included the following as common components of women's autonomy: decision-making over household matters or health care, control over some finances, and freedom of movement. For instance, Thapa and Niehof<sup>13</sup> in their study measured autonomy in four dimensions, including economic autonomy, domestic autonomy, movement autonomy, and intranspousal communication; Mistry et al<sup>15</sup> measured women's autonomy across three dimensions, including decision-making autonomy, permission to go out, and financial autonomy; Bloom et al<sup>6</sup> assessed the degree of women's autonomy in three related areas: control over finances, decision-making, and extent of freedom of movement. Dharmalingam and Philip<sup>12</sup> used similar measures in South India where the study focused on perceived economic independence, freedom to move within and between villages, and spousal interaction as measures of autonomy. Women's participation in household decisions was often considered an indicator of women's autonomy in decision-making.<sup>25</sup> Nigatu et al<sup>18</sup> specifically measured autonomy by the composite index of three constructs of women's autonomy: control over finances, decision-making power, and extent of freedom of movement. Fotso et al<sup>16</sup> used a principal component analysis (PCA) method to generate measures of autonomy, and used

Table 1 Characteristics of reviewed articles

Author(s), year of publication	Setting	Study objective	Study design	Sample size	Data source
Acharya et al, 2010 <sup>10</sup>	Nepal	Explored the links between women's sociodemographic characteristics and their autonomy in decision-making about health care	Survey	n=8,257 ever-married women	Nepal Demographic Health Survey (NDHS) 2006
Allendorf, 2007 <sup>26</sup>	Nepal	Compared women's and their spouses' reports of women's autonomy and its association with health decisions and outcomes in Nepal	Survey	n=8,726 ever-married women	Data for this analysis come from the 2001 Nepal Demographic and Health Survey (NDHS)
Al Riyami et al, 2004 <sup>11</sup>	Oman	Defined baseline data on ever-married women empowerment in Oman and the correlates of women's empowerment on the unmet need for modern contraception	Survey	n=2,037 ever-married women	National Health Survey (NHS), 2000; a community-based survey by the Department of Research and Studies in the Omani Ministry of Health
Bloom et al, 2001 <sup>6</sup>	North Indian city	Investigated the influence of women's autonomy on use of care during pregnancy and child birth	Survey	n=330 women who had delivered a child within 3 years of the date of interview n=522 currently married women	Primary data
Dharmalingam and Morgan, 1996 <sup>12</sup>	South India	Examined use of birth control among currently married women who reported that they want no more children	Survey	n=1,927 women who had a pregnancy outcome	Primary data
Fotso et al, 2009 <sup>16</sup>	Kenya	Examined possible influences of the extent of women's autonomy on their use of maternity services	Survey	n=1,778 currently married women	Data were from a maternal health study carried out in 2006 in two slums of Nairobi, Kenya
Haque et al, 2012 <sup>29</sup>	Bangladesh	Explored women's decision-making autonomy as a potential indicator of the use of contraception	Survey	n=4,860 women aged 15–49 years	National Survey (2007 Bangladesh Demographic Health Survey [BDHS])
Kamiya, 2011 <sup>17</sup>	Tajikistan, Central Asia	Examined whether or not and how women's autonomy within the household affects the use of reproductive health care	Survey	n=21,465 currently married rural women who had at least one singleton birth in the 3 years prior to the interview	National survey (Tajikistan Living Standards Survey [TLSS] 2007)
Mistry et al, 2009 <sup>15</sup>	Rural India	Assessed whether decision-making autonomy, permission to go out, and financial autonomy were associated with use of prenatal, delivery, and postnatal care	Survey	n=759 women who had under-five child	National Survey (population-based 1998–1999 National Family Health Survey)
Nigatu et al, 2014 <sup>18</sup>	Goba District, Ethiopia	Assessed the level of women's autonomy and predictors of autonomy regarding their own and their under-five children's health care utilization	Survey	n=8,456 currently married and nonpregnant women	Primary data collection
Rahman et al, 2014 <sup>7</sup>	Bangladesh	Explored women's decision-making autonomy as a potential indicator of the use of contraception	Survey	4,916 women aged 15–49 years	National data (2007 Bangladesh Demographic Health Survey [BDHS])
Rominski et al, 2014 <sup>27</sup>	Ghana	Explored the role of female autonomy in reported abortion-seeking	Survey	Bangladesh (n=10,582), Nepal (n=8,728), and India (n=89,199)	2008 Ghana Demographic and Health Survey (DHS)
Senarath and Gunawardena, 2009 <sup>25</sup>	South Asia	Investigated women's autonomy in decision-making on their own health care, and the factors that are associated with the autonomy in three South Asian countries	Survey	n=6,579 ever married women	Nepal Demographic and Health Survey (NDHS) 2001, Bangladesh DHS 2004, and National Family Health Survey India 1998–1999
Saleem and Bobak, 2005 <sup>28</sup>	India, and Nepal Pakistan	Investigated the relationship between women's autonomy and contraceptive use and the extent to which women's autonomy mediates the association between education and contraception use	Survey	n=341 women who delivered a child a year prior to survey n=14,070 women aged 15–49 years	2000 Pakistan Reproductive Health and Family Planning Survey (PRHFFS)
Thapa and Niehof, 2013 <sup>13</sup>	Four rural villages in Nepal	Assessed the relationship between women's autonomy and husbands' involvement in maternal health care	Survey, IDI and FGD	n=5,560 currently married women	Primary data collection
Wado, 2013 <sup>14</sup>	Ethiopia	Examined the association between women's autonomy and reproductive health care-seeking behavior of women in Ethiopia	Survey		2005 Ethiopian Demographic and Health Survey (EDHS)
Woldemicael and Tenkorang, 2009 <sup>98</sup>	Ethiopia	Examined the effect of women's autonomy on their health-seeking behavior during pregnancy and delivery	Survey		Data from the 2005 Ethiopian Demographic and Health Survey (EDHS)

**Table 2** Definition and measures of women's autonomy

Author(s), year of publication	How autonomy is defined	How autonomy is measured
Acharya et al, 2010 <sup>10</sup>	The ability – technical, social, and psychological – to obtain information and to use it as the basis for making decisions about one's private concerns and those of one's intimates (Dyson and Moore <sup>3</sup> )	DHS measures of autonomy Autonomy was measured in four areas of women's decision-making: 1) in women's own health care, 2) making major household purchases, 3) making purchase for daily household needs, and 4) visits to family or friends. Each of these questions had six responses that were recoded and grouped into two DHS measures of autonomy
Allendorf, 2007 <sup>26</sup>	Study specific Women's opportunity to make choice that affect their lives	Women's autonomy was measured in the area of decision-making through five questions: 1) whether the woman has the final say on her health care, 2) making large household purchases, 3) making purchases for daily needs, 4) paying visits to family, friends, and relatives, and 5) choosing the food to be cooked each day
Al Riyami et al, 2004 <sup>11</sup>	Definition of autonomy by Dyson and Moore: <sup>3</sup> "the ability – technical, social, and psychological – to obtain information and to use it as the basis for making decisions about one's private concerns and those of one's intimates"	NHS indicators of empowerment Two indicators of empowerment were developed from women's status module to measure women's involvement in decision-making and freedom of movement. Women were asked "who has final say on eight decisions including family planning, what to cook, household expenditure, children's clothes, children's medicine and health care, problem solving, having another baby and visiting relatives"
Bloom et al, 2001 <sup>6</sup>	The study used the term autonomy or interpersonal control as defined by these authors (Basu <sup>4</sup> ; Dyson and Moore <sup>3</sup> ; Miles-Doan and Bisharat <sup>22</sup> ; Mason <sup>49</sup> ; Saflios-Rothschild <sup>23</sup> ): "the capacity to manipulate one's personal environment through control over resources and information in order to make decisions about one's own concerns or about close family members" and "the ability to determine events in their lives, even though men and other women may be opposed to their wishes"	Study specific Assessed in three different areas: control over finances, decision-making power, and extent of freedom of movement. A composite measure for each area was created using the sums of equally weighted binary input variables. Women were scored 1 for answers to each factor that contributed to a higher degree of autonomy; otherwise they were scored 0
Dharmalingam and Morgan, 1996 <sup>12</sup>	The ability – technical, social, and psychological – to obtain information and to use it as the basis for making decisions about one's private concerns and those of one's intimates (Dyson and Moore <sup>3</sup> )	Study specific The study focused on three measures of autonomy: perceived economic independence, freedom to move within, and between villages and spousal interaction, ie, whether the spouse discusses family finances and desired family size
Fotso et al, 2009 <sup>16</sup>	The ability to make and execute decisions regarding personal matters of importance on the basis of the woman's power over others, access to information, control over material resources, and freedom from violence by her husband or other men (Caldwell and Caldwell <sup>50</sup> ; Dyson and Moore <sup>3</sup> ; Jejeebhoy and Sathar <sup>51</sup> )	Study specific A PCA method was used to generate measures of autonomy. The authors extracted the first component from responses to nine questions as a "decision-making autonomy" variable, responses to an additional six questions created a "freedom of movement autonomy" variable, and all questions were used to generate an "overall autonomy" variable. Each measure of autonomy was then recoded as tertiles with categories labeled low autonomy, middle autonomy, and high autonomy
Haque et al, 2012 <sup>29</sup>	No specific definition of female autonomy	DHS measures of autonomy Autonomy variables were based on the review of the literature (Bloom et al <sup>6</sup> ; Furuta and Salway <sup>52</sup> ; Woldemicael <sup>53</sup> ) and on the structure of the BDHS data on the final say on own health, child health care, and family planning with partner
Kamiya, 2011 <sup>17</sup>	The ability of women to make decisions within the household relative to their husband (Anderson and Eswaran <sup>9</sup> )	Proxy measure of autonomy Women's decision-making power within the household was used as a proxy indicator to measure female autonomy. Three binary variables were used including whether or not female members make a decision on "children's well-being", "buying major items", and "borrowing money"

(Continued)

Table 2 (Continued)

Author(s), year of publication	How autonomy is defined	How autonomy is measured
Mistry et al, 2009 <sup>15</sup>	Adopted the definition of Dyson and Moore <sup>3</sup> and Basu <sup>4</sup> : “[...] the capacity to manipulate one’s environment through control over resources and information for personal interests”	Study specific Women’s autonomy was measured across three dimensions: decision-making autonomy, permission to go out, and financial autonomy. Decision-making autonomy was measured based on responses to “who makes decisions in respondent’s household about”: “obtaining health care for yourself, purchasing jewelry or other major household items”, and “going and staying with parents or siblings”
Nigatu et al, 2014 <sup>18</sup>	The extent of independent decision-making, freedom from constraint on physical mobility, and the ability to forge equitable power relationships within families	Study specific Women’s autonomy was measured by the composite index of the three constructs of women’s autonomy: control over finance, decision-making power, and extent of freedom of movement
Rahman et al, 2014 <sup>7</sup>	The capacity to manipulate one’s environment through control over resources and information for personal interests (Dyson and Moore <sup>3</sup> ; Basu <sup>4</sup> )	DHS measures of autonomy Women’s household decision-making autonomy was measured based on responses to individual questions regarding who makes decisions in the (respondent’s) household about: 1) obtaining health care, 2) large household purchases, 3) household purchases for daily needs, 4) visits to family or relatives, and 5) child health care
Rominski et al, 2014 <sup>27</sup>	No specific definition of autonomy	DHS measures of autonomy Measured by a novel five-point scale created from existing DHS items: women’s freedom of movement, discretion over earned income, decision-making related to economic matters, freedom from violence or intimidation by husbands, and decision-making related to health care
Saleem and Bobak, 2005 <sup>28</sup>	No specific definition of autonomy	Study specific Decision autonomy was estimated from nine questions on decision-making (eg, children’s health care, education, buying/selling property, and what to cook). Women were considered as “participating” in a decision if they made the decision alone or jointly with their husband or someone else
Senarath and Gunawardena, 2009 <sup>25</sup>	The proportion of women who make the decision either alone or jointly with husband or someone else	Study specific Two dimensions of women’s autonomy were measured: decision autonomy and movement autonomy. With respect to decision-making, women were asked who in their family usually has the final say on making decisions on her own health care
Thapa and Niehof, 2013 <sup>13</sup>	Definition of autonomy by Dyson and Moore: <sup>34</sup> “the ability – technical, social, and psychological – to obtain information and to use it as the basis for making decisions about one’s private concerns and those of one’s intimates”	Study specific Measured in four dimensions: economic autonomy, domestic decision-making, movement autonomy, and intraspousal communication
Wado, 2013 <sup>14</sup>	Definition of autonomy by Dyson and Moore: <sup>34</sup> “the ability – technical, social, and psychological – to obtain information and to use it as the basis for making decisions about one’s private concerns and those of one’s intimates”	EDHS measures of autonomy Women’s autonomy was measured by women’s participation in domestic decision-making, attitude toward wife beating, attitude toward refusing sex with husband, and whether seeking permission to get medical help is a big problem
Woldemicael and Tenkorang, 2009 <sup>48</sup>	The capacity and freedom of a woman to act independently on her own and on the authority of others; for example, the ability to go to places alone, such as visiting health facilities or the market without asking anyone’s permission, making decisions regarding contraceptive use or household purchases (Basu <sup>4</sup> ), and the ability of women to make and execute independent decisions pertaining to personal matters of importance to their lives and their families (Mason <sup>5</sup> )	DHS measures of autonomy Measured with four behavioral indicators that measure the degree of a woman’s autonomy using questions from the EDHS on who has the final say in making large household purchases, making household purchases for daily needs, and obtaining own health care

**Abbreviations:** BDSHS, Bangladesh Demographic and Health Survey; EDHS, Ethiopian Demographic and Health Survey; DHS, Demographic and Health Survey; NHS, National health Survey; PCA, principal component analysis.

responses to nine questions as a “decision-making autonomy” variable, from six additional questions to create a “freedom of movement autonomy” variable, and then used all the questions to generate an “overall autonomy” variable. Each measure of autonomy (ie, the principal component) was then recoded as tertiles with categories labeled low autonomy, middle autonomy, and high autonomy. In one study,<sup>17</sup> women’s decision-making power within the household was used as a proxy indicator to measure female autonomy.

Eight of the 17 articles adopted measures of women’s autonomy from questions in their country’s Demographic Health Surveys (DHS). For example, among Bangladeshi women, decision-making autonomy was measured based on responses to individual questions regarding who makes decisions in the household about 1) obtaining health care, 2) large household purchases, 3) household purchases for daily needs, 4) visits to family or relatives, and 5) child health care.<sup>7</sup> Similarly, using items in the Ethiopian Demographic Health Survey, Woldemicael and Tenkorang<sup>1</sup> considered four behavioral indicators that measured the degree of a woman’s autonomy: who has the final say on 1) making large household purchases, 2) making household purchases for daily needs, 3) obtaining the woman’s own health care, and 4) freedom of movement. In Ghana, autonomy was measured by a novel five-point scale created from existing DHS items: women’s freedom of movement, discretion over earned income, decision-making related to economic matters, freedom from violence or intimidation by husbands, and decision-making related to health care.<sup>27</sup>

## Decision-making autonomy and women’s health care

The reviewed studies found varying levels of health care decision-making autonomy in different countries and among different regions of the same country. Among Nepalese women, a low level of women’s autonomy was found to be a contributory factor to poor maternal health service utilization.<sup>13</sup> A study using nationally representative household surveys found that 13.4% of ever-married women in the reproductive age group in Nepal, 17.6% in Bangladesh, and 28.1% in India made decisions alone regarding care for their own health, including 11.5% of current users of contraceptives who reported that they alone made decisions to use contraception.<sup>25</sup> At the same time, however, health care decisions were made without women’s participation in the majority of Nepalese households (72.7%) and approximately half of Bangladesh (54.3%) and Indian (48.5%) households.<sup>25</sup>

This was consistent with the study findings among Bangladeshi women that more than one-third (37.3%) were

not involved in decision-making about their own health care,<sup>7</sup> and among women in rural India, more than half (55.6%) were not involved in decision-making about their own health care.<sup>15</sup> Nigatu et al<sup>18</sup> reported that about half of the women in their Ethiopian study had the autonomy to take their child to a health facility, while 43.9% of women were free to go to a health facility for their own health care service needs. They also reported that of the 65.2% women who had access to money, 38.1% of them were autonomous to use the money for health services utilizations without consulting others.

## Decision-making with respect to different types of health care

Most of the reviewed papers examined autonomy in the context of decisions about reproductive health. Mistry et al<sup>15</sup> reported that greater autonomy in decision-making increased the likelihood of women receiving prenatal, delivery, and postnatal care in rural India and stressed that low levels of autonomy adversely affect women’s likelihood of using pregnancy care services, especially prenatal and postnatal checkups. Rahman et al<sup>7</sup> reaffirmed the association between women’s autonomy and contraceptive use in Bangladesh. Nigatu et al<sup>18</sup> reported that a higher degree of women’s autonomy in household decision-making greatly increased the use of contraception. Similar findings were reported by Al Riyami et al<sup>11</sup> for women in Oman and by Saleem and Boback<sup>28</sup> in Pakistan.

Kamiya<sup>17</sup> reported that in households in which female members make decisions on financial matters, women have a greater chance of receiving antenatal and delivery care. Mistry et al<sup>15</sup> also showed that financial autonomy of women was associated with the use of delivery care and postnatal checkups. Similarly, Saleem and Bobak<sup>28</sup> reported a significant association between decision-making autonomy and contraceptive use, even after controlling for sociodemographic variables. In contrast, Fotso et al<sup>16</sup> did not find any relationship between utilization of maternal health services for delivery and high levels of women’s overall autonomy, freedom of movement, or decision-making in Kenya. Three studies found that the level of autonomy affects women’s health care seeking generally, not limited to reproductive health.<sup>10,25,26</sup> No study, however, examined other specific domains of health care such as immunization, surgical procedures, invasive clinical procedures (such as biopsies), hospital admission, or blood transfusion.

## Determinants of women’s decision-making autonomy

Some of the reviewed studies examined factors such as age, education, and other socioeconomic and cultural factors

to describe their influence on women's decision-making autonomy. One of the studies from South Asia<sup>25</sup> reported that women's autonomy and decision to seek health care were determined by social and cultural factors and, in some cases, legal constructs and practices and perceived beliefs about the severity of the illness. Haque et al<sup>29</sup> found that mothers with greater autonomy are more likely to be older, have more education, live in urban areas, and be among the richest bands of wealth. Similarly, Acharya et al<sup>10</sup> found that increased age, paid employment, more education, and having a greater number of living children were all positively associated with women's autonomy in decision-making.

Nigatu et al<sup>18</sup> reported that women in Ethiopia who have primary, secondary, and postsecondary education are about two and four times more likely to have higher autonomy compared to women with no formal education. Kamiya<sup>17</sup> reported no statistically significant relationship in Tajikistan between women's autonomy and their educational attainment, but a favorable association with the husbands' education, implying that educated husbands are more likely to include female family members in decision-making processes. The latter finding was corroborated by Nigatu et al<sup>18</sup> where along with household income, women's age, and husbands' employment, husbands' secondary educational status was significantly associated with women's autonomy in seeking health care services for themselves. In Bangladesh, Haque et al<sup>29</sup> expressed the notion that because women are governed by social norms of female seclusion, even in instances where women wish to make decisions regarding their health care, they may need help and agreement from other family members, particularly their husbands or mothers-in-law.

## Discussion

Female autonomy has been widely acknowledged as a multi-dimensional entity that refers to different aspects of women's lives. In addition to its significant intrinsic value, autonomy is considered instrumentally essential for decision-making in a range of health care situations, from health care seeking and utilization to choosing among treatment options. This review synthesized the published empirical research on women's autonomy in health care decision-making in developing countries and included studies using diverse methodologies, from different geographical and cultural settings, and within different health care systems. Several themes emerged: 1) despite the observation that there is no one widely accepted operational definition for autonomy, there are common elements to most definitions utilized in these studies and these elements lend themselves to measuring the level of

women's autonomy; 2) autonomy that supports health care decision-making is associated with better health outcomes, although these studies predominantly examined reproductive health, and very few other areas of women's health care; and 3) several sociocultural factors, such as education, age, and income, positively affect women's autonomy, independent of the country or culture in which they live.

Most of the studies of women's autonomy related to health care decision-making used definitions of autonomy that encompassed similar dimensions – the ability to obtain information and make decisions about one's own concerns, have some control over finances and have some freedom of movement.<sup>3–5,30,31</sup> Stemming from these definitions, a number of dimensions of women's autonomy are recognized, including household and health care decision-making autonomy, movement autonomy, and economic autonomy.<sup>13</sup> Most studies measure three or more of these dimensions, while some attempt to measure all.

Although previous discussions about how to measure autonomy exist,<sup>32,33</sup> a set of questions included in the national demographic and health surveys has led to a standard measure of women's autonomy. A big advantage of the DHS system is that the same questions are asked across many women in many countries. Nonetheless, just four or five items measure autonomy in DHS (depending on the phase of the DHS), and these may not adequately capture the complexity of women's autonomy. Also, it remains uncertain how well validated the DHS autonomy questions are, both internally and when compared with more detailed measures of autonomy. Indeed, it has been shown that dimensions of autonomy used in surveys are not always internally consistent.<sup>20</sup> One study examined internal consistency for autonomy measures in four dimensions each of which was measured with multiple items and showed Cronbach's  $\alpha$  ranging from 0.61 for domestic autonomy to 0.96 for economic autonomy.<sup>13</sup> Cronbach's  $\alpha$  is a measure of internal consistency for items on a scale (ranging in value from 0 for no internal consistency to 1 for the highest possible internal consistency). The wide variation observed (0.61–0.96) indicates that the items on autonomy measures often show different degrees of internal consistency for different dimensions of autonomy. Furthermore, different dimensions may show varying association with outcomes such as child nutrition<sup>34</sup> and husband's involvement in maternal health care.<sup>13</sup> Alternative methods to the DHS method of measuring women's autonomy are also employed in the identified literature. Several of the studies in this review included additional measures of financial control and freedom of movement to measure autonomy supplementing questions

about health care and household decision-making.<sup>6,18</sup> This observation raises questions, however, about the extent to which autonomy in decision-making over financial matters is measuring the same underlying concept as autonomy in making daily decisions for the household. Furthermore, survey item responses have limited ability to capture nuance and complexity, and the interpretation of the findings may not be so straightforward. In one study, for example, of 23 communities in five Asian countries, it was shown that wives and husbands differ in their assessment of the level of the wife's autonomy.<sup>35</sup> Although this may be a reflection of the different perspectives of who is answering the questions, it may also point to geographical or contextual differences in sex roles and perceptions of women's autonomy. For example, in societies where pregnancy or minor household issues are considered a "woman's domain", women may seem to have more autonomy than in societies where these are not considered women's domain. Therefore, because of specific cultural characteristics of a society and differences in interpretation (among other reasons), the standard questions used in measuring autonomy may not be equally valid across different cultural contexts.

For such a complex and multifaceted concept, only one study<sup>13</sup> used qualitative research methods to study autonomy. Qualitative methods have the advantage of being able to contextualize findings and capture nuance. For example, the qualitative component of Thapa and Niehof's<sup>13</sup> study brought up issues such as women's dependence on men's consent for the use of specific medical services, husbands' feeling of a sense of responsibility for maternal health care decisions, women valuing their husbands' support and presence during pregnancy care (traditionally considered a woman's domain), sociocultural norms that may stigmatize men for being too supportive during their wives' maternity period, and changing social norms about the expected role of husbands in maternal health. Qualitative studies could help clarify, for example, which dimensions of women's autonomy are relevant to their health care decisions and how to measure them. Qualitative studies could also further the understanding of how to distinguish women's autonomy from social support in our measured constructs. For example, when a decision is made jointly with a husband/partner or others, it is often interpreted as indicating lower autonomy for the woman. Yet, making a decision alone may represent more autonomy or simply lack of support from a husband/partner who would rather not be involved.<sup>34</sup> Indeed, some studies have shown that a higher level of women's autonomy, as measured by her sole final decision-making power, was associated with

significantly lower male involvement in pregnancy health.<sup>13,36</sup> However, as these findings were from survey responses, the reasons remain speculative.

An important philosophical issue is what it means for individuals to be autonomous within any culture or society. Given that people are always imbedded in their social context, their decisions often take into account consideration for others in their households and communities, and decisions may not be, or appear not to be fully autonomous. Indeed, questions about autonomous decision-making are especially pertinent in the context of health care and medical services in which the individual rarely "stands alone" in decision-making without consideration for and influence of family, loved ones, and caregivers. The concept of individual in contemporary Western cultures is often understood as independence, self-sufficiency, and self-directedness. However, autonomy as an individualistic ideal has been called into question for several reasons,<sup>37-40</sup> including the fact that it overlooks or even devalues relationships of interdependence (such as friendships, loyalty, caring, and responsibility) and also ignores the fact that people are socially embedded, with part of their identity being constituted by their social relations. Authors writing from developing countries have found notions of individualistic autonomy to be particularly ill-suited to their environment. For example, Mumtaz and Salway<sup>41</sup> identified the preeminence of communality rather than individuality as the social ethic in their empirical studies of Jatti society in Pakistan. They found that social relationships constitute an individual's social identity and that an individual is not considered a construct separate from others. In summary, empirical researches from developing countries have called into question the adequacy and appropriateness of using a concept of individual autonomy as a basis for understanding several issues involving women's decision-making. Some authors have proposed an alternative model of relational autonomy, which highlights the social context within which all individuals exist and acknowledges the emotional and embodied aspects of decision makers.<sup>42</sup> Relational autonomy may be particularly applicable to decision-making in health care, especially reproductive health care. Reproductive issues directly involve other members of the family. Health care decisions often impact the ability to live a healthy life, livelihoods, disability, and death and could also include risky (and often painful) procedures, lifelong treatment for chronic disease, major surgery, rehabilitation, and physical therapy. Individuals may be ill-equipped to deal with these kinds of decisions in an individualistic, autonomous manner. Relational autonomy explicitly acknowledges the supportive and interdependent

roles played by other household members, caregivers, and others within the social context of the individual.

Despite the wide spectrum of women's health care needs and health care utilization, most studies of women's autonomy in developing countries focused on reproductive health. This could partly reflect developing countries' national surveys that focus on fertility, contraception, reproductive health, or maternal and child health. For Western countries, there is a rich literature on women's decision-making in other areas of health care, for example, cancer treatment.<sup>43-46</sup> For developing countries, there are no comparable studies of women's cancer treatment decision-making and simply no data that we could find on how women make decisions about many other important components of health care. Each of these components requires informed consent and involves crucial decision-making steps. To complicate matters, many of these areas have specific cultural implications that could influence decision-making. It is well recognized, for example, that blood transfusions are not acceptable in certain religious traditions (eg, Jehovah's Witnesses). Furthermore, blood has a special place in tribal/cultural beliefs in various cultural contexts (especially in sub-Saharan Africa), which may introduce limits on decision-making autonomy. Currently, there remains a substantial gap in the literature on women's decision-making about health care issues in developing countries outside of the realm of reproductive health.

Many factors were shown to affect women's autonomy in the reviewed studies, including age, employment status, and wealth (or household income). Notably, these factors are highly correlated and, in general, show the expected relationship with women's autonomy, ie, older women who are employed and in a certain income bracket have higher levels of decision-making autonomy. Education was also a factor influencing women's autonomy in various studies. Highly educated women are more likely to be knowledgeable about their own health, have more self-confidence, and be more assertive than those with less or no education.

This review has certain limitations. First, as the reviewed studies come from a limited number of countries in South Asia, central Asia, and Africa, the findings may not be generalizable to other developing countries. Secondly, we only considered the English literature. There could be relevant scientific studies from countries in which the primary language is French, Spanish, Portuguese, or Arabic, which our review did not cover. Nonetheless, the review provides a synthesis of a wide range of studies examining women's autonomy with regard to health care decision-making in developing or low-income country settings. Notably, we summarize factors found to be associated with women's autonomy

in empirical research, identify gaps in the literature, and highlight opportunities for further research.

## Conclusion

Both enabling autonomous decision-making and respecting women's autonomy are valuable and laudable goals. Educating and empowering women will promote their autonomy and contribute to addressing the sustainable development goals of good health, quality education, and sex equality. Autonomy is considered essential for decision-making in a range of situations, from health care seeking and utilization to choosing among treatment options. This review of published empirical research on women's autonomy and decision-making in developing countries found that studies use operational definitions of autonomy that have common elements and use a small range of methods in measuring the level of women's autonomy. Studies show that autonomy is positively associated with health care decision-making and better health outcomes, although the literature has predominantly examined reproductive health, and very few other health decisions affecting women. Age, education, and income level are factors that affect women's autonomy, independent of the specifics of the country or culture in which they live.

This review identified important gaps in the literature, including lack of data on other health care decisions beyond reproductive/maternal health (such as surgical procedures, hospital admissions, or blood transfusions) and lack of qualitative studies to provide nuance and explain the relationship between developing country, women's autonomy, and their ability to make health care decisions, including clarifying the role of social support, sex roles, and cultural norms in relation to women's autonomy. Further validation of the measures of autonomy that have been used, including those based on the widely used DHS questions, would help illuminate these issues across countries and time. These and other themes are vital areas for future research to help understand and promote autonomous decision-making among women.

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## Supplementary material

### Terms used to search PubMed

(women's health [MeSH] or women's health services [MeSH] or maternal health services [MeSH] or prenatal care [MeSH] or pregnancy [MeSH] or pregnancy, unwanted [MeSH] or family planning services [MeSH] or contraception [MeSH] or abortion, induced [MeSH] or reproductive rights [MeSH] or breastfeeding [MeSH] or mass screening [MeSH] or hiv [MeSH] or neoplasms [MeSH] or communicable diseases [MeSH] or bacterial infections and mycoses [MeSH] or parasitic diseases [MeSH] or virus diseases [MeSH] or noncommunicable disease\* [tw])

AND

(decision\* [ti] or decision-making [MeSH] or autonom\* [tiab] or voluntariness [tiab] or empower\* [tiab] or self-determination [tw] or power [MeSH]) AND (women [mh] or women\* [tiab])

AND

((develop\* [tw] or underdevelop\* [tw] or under develop\* [tw] or underserved [tw] or under served [tw] or deprived [tw] or poor [tw] or third-world [tw] or low\* income [tw] or middle income [tw]) AND (nation\* [tw] or countr\* [tw] or world [tw] or afric\* [tw] or asia\* [tw] or latin america\* [tw] or south america\* [tw]))

### Terms used to search Scopus

("decision-making autonomy" OR women's autonomy) AND (female\* OR women OR woman) AND (health OR medical OR clinical OR disease\* OR hospital OR clinic\*) AND TITLE-ABS-KEY ("developing countr\*" OR "third world" OR rural OR "low or middle income" OR africa OR "sub-sahara" OR asia).

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