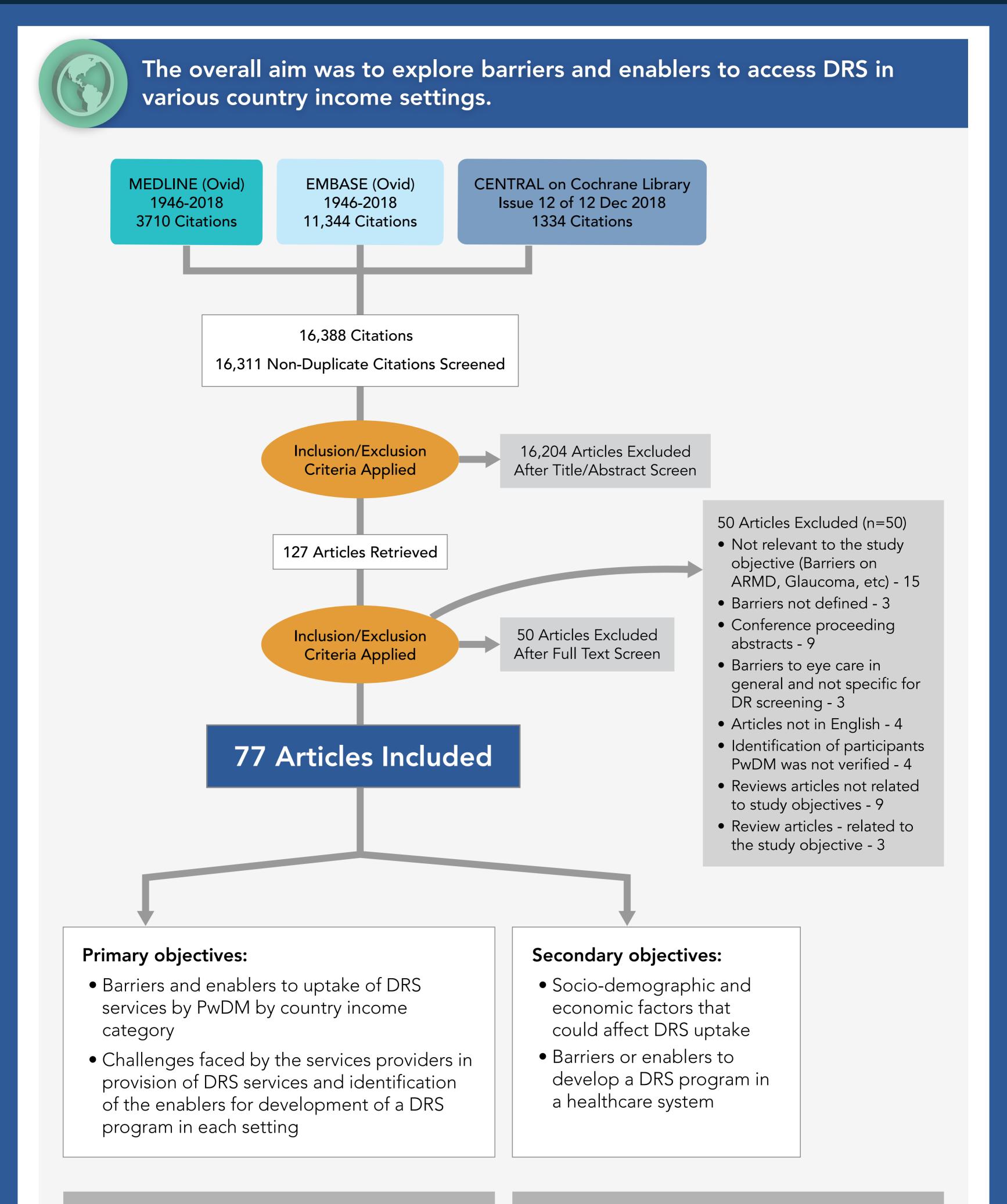
# Systematic review on barriers and enablers for access to diabetic retinopathy screening services in different income settings

Piyasena MMPN, Murthy GVS, Yip JLY, et al. Systematic review on barriers and enablers for access to diabetic retinopathy screening services in different income settings. *PLoS ONE*. 2019;14:e0198979. doi:10.1371/journal.pone.0198979

Knowing the barriers and enablers in advance in contrasting different country income settings may accelerate development of a successful diabetic retinopathy screening (DRS) program. This would be especially applicable in the low-income settings with the rising prevalence of DR. The aim of this systematic review is to identify and contrast the barriers/enablers to DRS for different contexts using both consumers ie, people with diabetes (PwDM) and provider perspectives and system level factors in different country income settings.





#### Inclusion criteria:

- **Consumers**—Studies which have assessed barriers at group or individual level of PwDM at or referred to a permanent healthcare facility for DRS
- Service providers—Studies in which participants were service providers who have direct contact with PwDM in a permanent healthcare institution and/or clinical decision makers/other stake holders involved in DRS service related decision making



## **Exclusion criteria:**

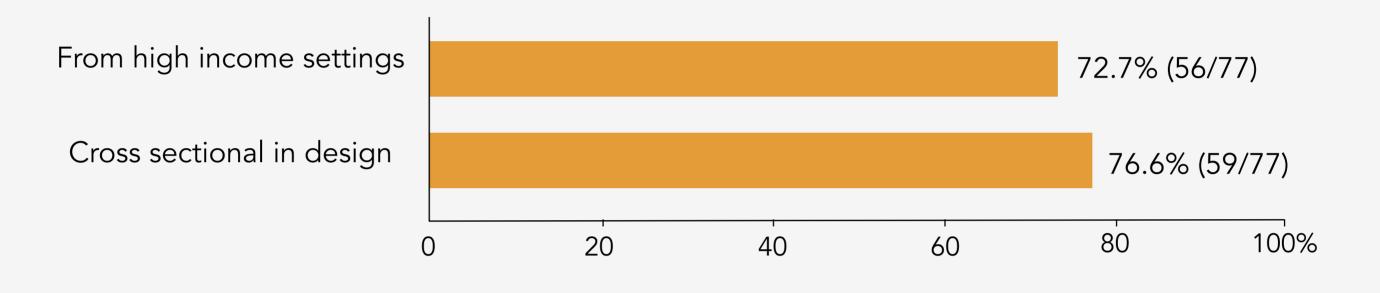
- Studies which have obtained the study sample from the general population without specifying status of DM
- Absence of standard diagnostic criteria for DM
- Studies assessing barriers for eye care in general without specifying DRS
- Studies assessing barriers for screening DM complications in general without specifying barriers for DRS

Studies were not restricted for inclusion by study design. Studies were included that used qualitative, quantitative and mixed methods.

ARMD, age-related macular degeneration; DR, diabetic retinopathy; DRS, DR screening; PwDM, people with diabetes.

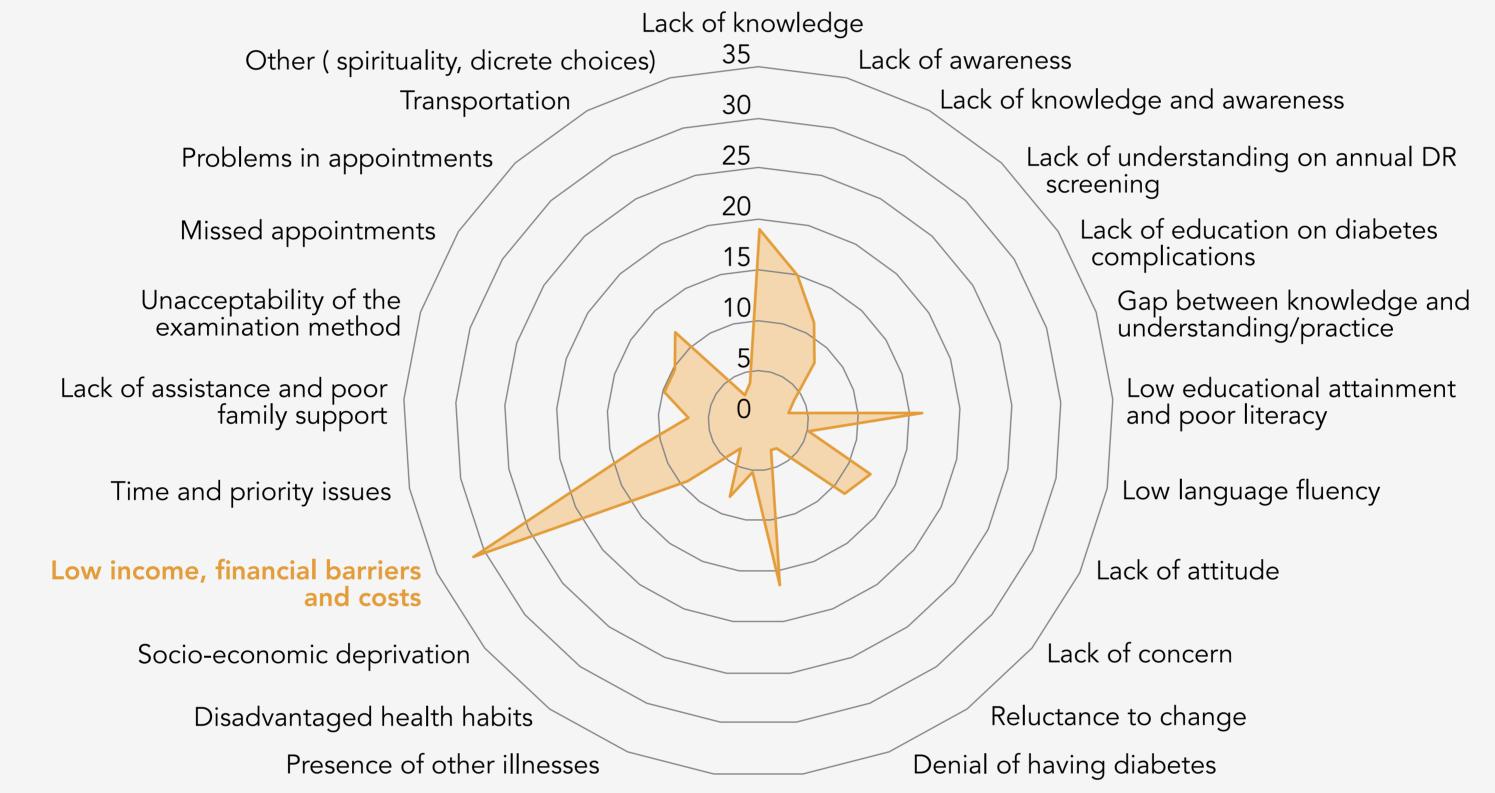
Most studies were from high income settings and cross sectional in design.

Characteristics of studies reviewed (n=77)



The top barrier for consumers was low income, while the top barrier for providers was accessibility of appointments and wait times.

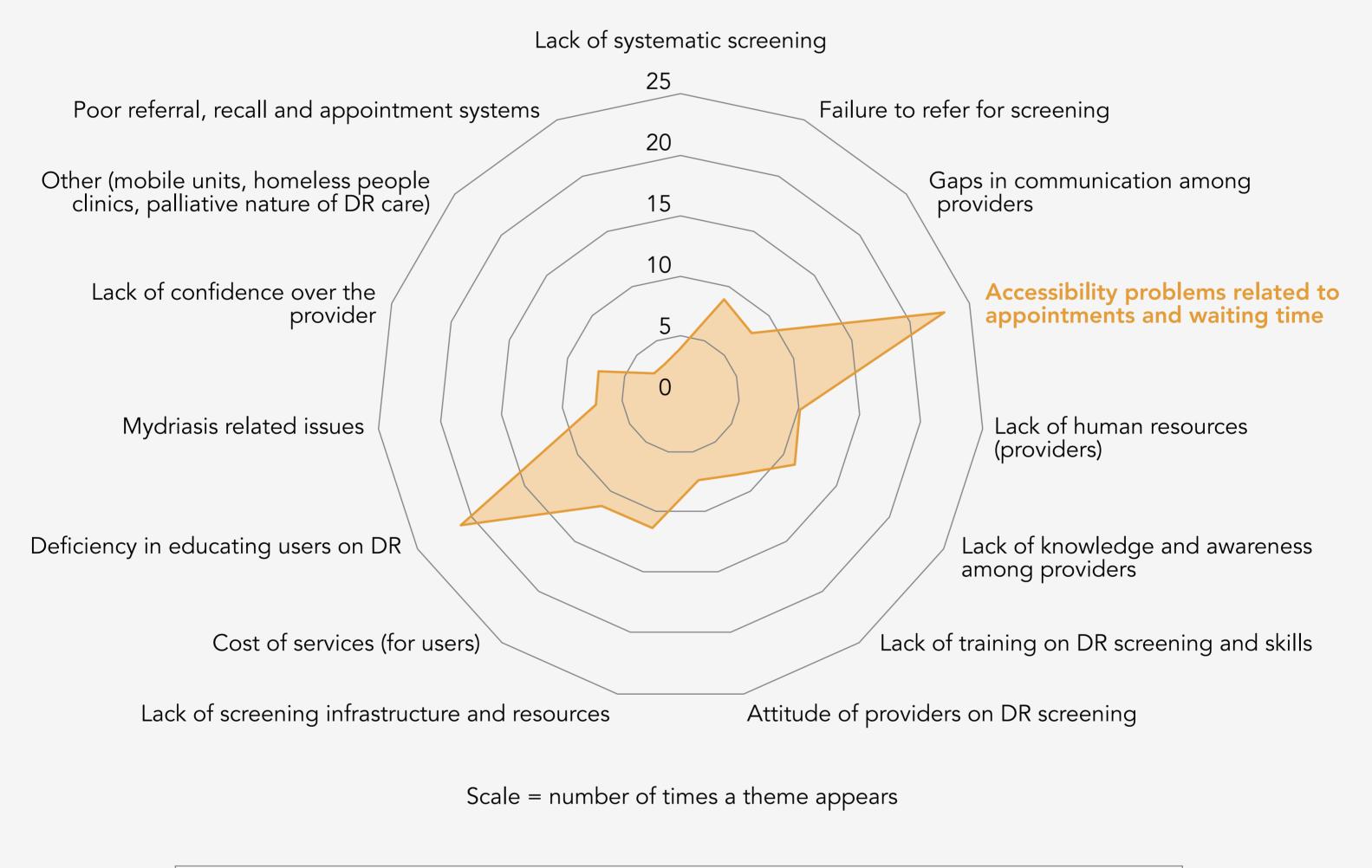
### **User barriers**



Scale = number of times a theme appears

From the perspectives of consumers, the major barriers identified were lack of knowledge, attitude, awareness and motivation. Higher odds of uptake of DRS services was observed when PwDM were provided health education (odds ratio (OR) 4.3) and having knowledge on DR (OR range 1.3–19.7).

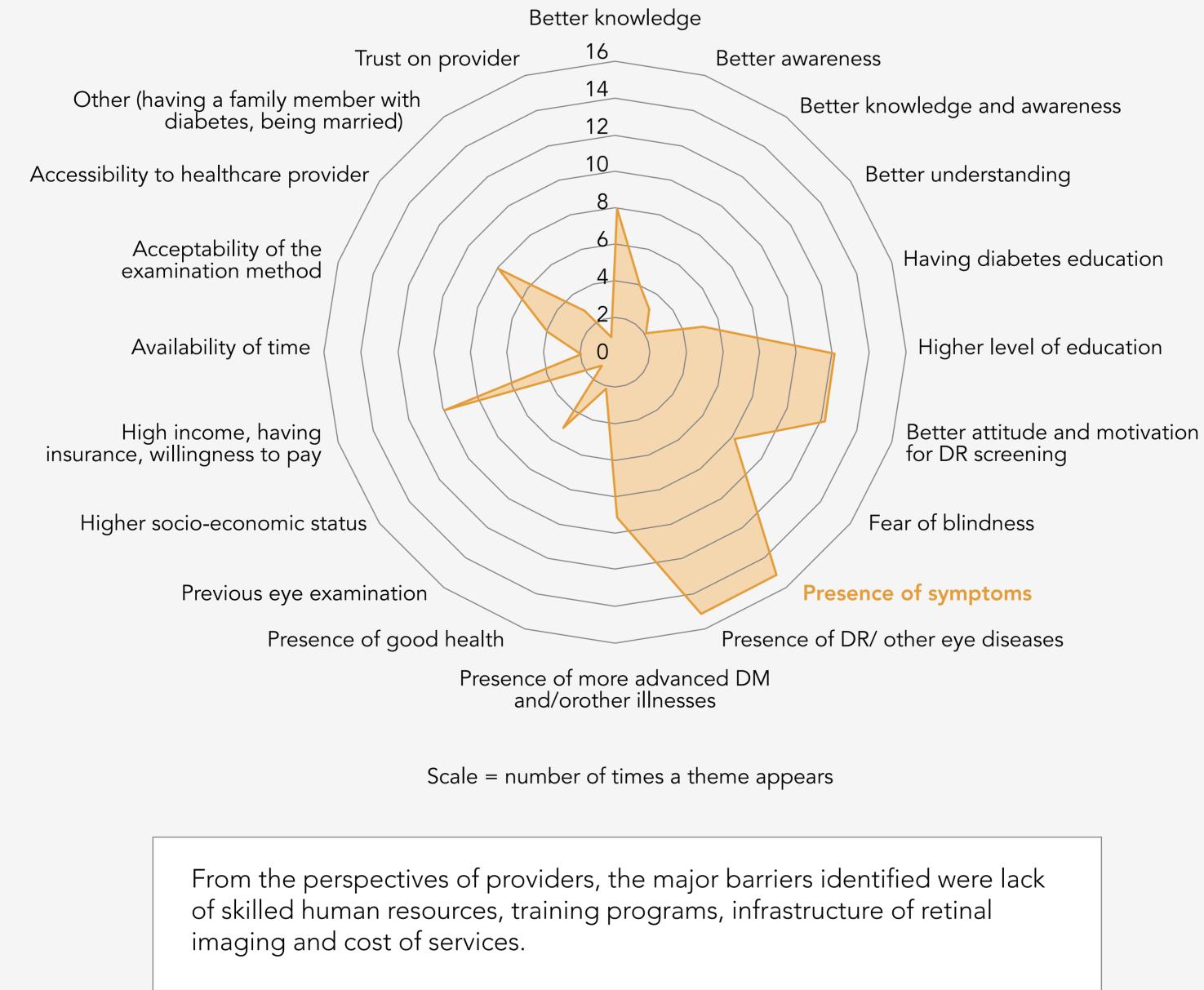
### **Provider barriers**



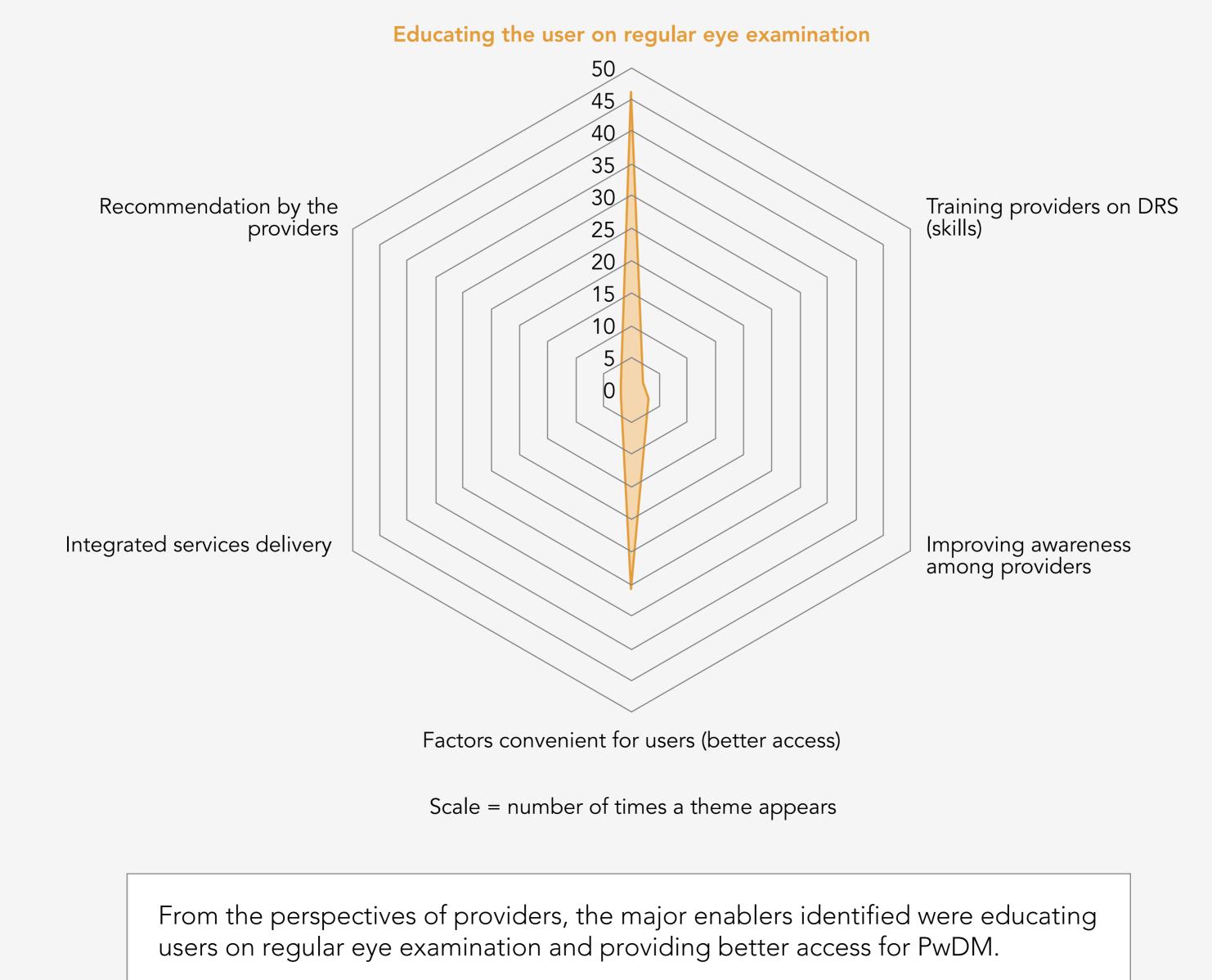
The enablers identified were fear of blindness, proximity of screening facility, experiences of vision loss and being concerned of eye complications.



# User incentives



#### **Provider incentives**





Knowing the barriers to access DRS is an important first step to develop a successful screening program. The awareness, knowledge and attitude of the consumers, availability of skilled human resources and infrastructure emerged as the major barriers to access to DRS in any income setting.