

## Factors Affecting the Success of Premarital Screening Service in Middle Eastern Islamic Countries

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**Abstract :** Background: In Middle Eastern Islamic Countries (MEICs), there is a high prevalence of genetic blood disorders (GBDs), particularly sickle cell disease and thalassemia. The GBDs are considered a major public health concern, especially with the increase in affected populations along with the associated psychological, social, and financial cost of management. Despite the availability of premarital screening services (PSS) that aim to identify the asymptomatic carriers of GBDs and provide genetic counseling to couples in order to reduce the prevalence of these diseases; yet, the success rate of PSS is very low due to religious and socio-cultural concerns. Purpose: This paper aims to highlight the factors that affect the success of PSS in MEICs. Methods: A literature review of articles located in CINAHL, PubMed, SCOPUS, and MedLine was carried out using the following terms: "premarital screening," "success," "effectiveness," and "genetic blood disorders." Second, a hand search of the reference lists and Google searches were conducted to find studies that did not exist in the primary database searches. Only studies which are conducted in MEICs countries and published in the last five years were included. Studies that were not published in English were excluded. Results: Fourteen articles were included in the review. The results showed that PSS in most of the MEICs was successful in achieving its objective of identifying high-risk marriages; however, the service failed to meet its ultimate goal of reducing the prevalence of GBDs. Various factors seem to hinder the success of PSS, including poor public awareness, late timing of the screening, culture and social stigma, religious beliefs, availability of prenatal diagnosis and therapeutic abortion, emotional factors, and availability of genetic counseling services. However, poor public awareness, late timing of the screening, and unavailability of adequate counseling services were the most common barriers identified. Conclusion: Overcoming the identified barriers by providing effective health education programs, offering the screening test to young adults at an earlier stage, and tailoring the genetic counseling would be crucial steps to provide a framework for an effective PSS in MEICs.

**Keywords :** premarital screening, success, effectiveness, and genetic blood disorders

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