

RE: Six-year outcome of the national premarital screening and genetic counseling program for sickle cell disease and β -thalassemia in Saudi Arabia

To the Editor: I greatly thank Memish and Saeedi¹ and have two comments on their outstanding study. First, apart from helping determine the exact prevalence of various genetic diseases, premarital screening and genetic counseling program administers suitable counseling (if needed) before completing the marriage proposal and truly offers the sound option of cancelling at-risk marriage. It is interesting to know that the frequency of voluntary cancellation of marriage proposals among at-risk couples in Memish and Saeedi study¹ showed more than fivefold increase between 2004 and 2009 (from 9.2% to 51.9%, $P < .001$). Consanguineous marriage, a noticeable phenomenon not only in Saudi Arabia (56%),² but in many Arabian countries, tremendously contributes to the prevailing of various genetic diseases, particularly hemoglobinopathies. Control of consanguineous marriage remains a challenge if these diseases are to be successfully contained. It has often been proposed that consanguineous marriage should be strongly discouraged on the basis of medical background to prevent various genetic diseases. However, several expert groups have pointed out that this proposal is inconsistent with the ethical principles of genetic counseling, overlooks the social importance of consanguineous marriage, and is ineffective. Instead, they have suggested that the custom increases the possibilities for effective genetic coun-

seling, and have recommended a concerted effort to identify families at increased risk, and to provide them with risk information and carrier testing when feasible.³ Nevertheless, it is anticipated that implementation of both neonatal screening and premarital screening and genetic counseling programs could provide adequate preventive measures at primary, secondary, and tertiary levels and effectively contain these genetic diseases in a highly consanguineous population like Saudi Arabia.

Secondly, glucose-6-phosphate dehydrogenase (G6PD) deficiency prevails in Saudi Arabia with an overall prevalence rate determined to be in excess of 42%.⁴ Determining the outcome of the national premarital screening and genetic counseling program for G6PD deficiency deserves to be an interesting objective to be achieved.

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DOI: 10.4103/0256-4947.87109

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