Aim: To investigate correlations among learning styles, academic achievement and gender of medical students in preclinical years. Material and Method: All medical students in preclinical years at our institution were approached. The Grasha-Reichmann Student Learning Styles Scale was used to define primary learning style of the participants in six categories (independent, dependent, competitive, collaborative, avoidant, and participant). Academic achievement criteria included thematic block exam scores, final exam scores, and passing grades. Results: Competitive (34.8%) and collaborative (33.7%) were the most frequent learning styles among participants. Competitive learning style was associated with higher mean final exam scores and passing grades. Female students with competitive and collaborative learning styles scored significantly higher than male students. Discussion: Students with competitive learning styles had higher academic achievement than others. Among students with competitive and collaborative styles, there was a gender difference in favor of female students in terms of academic achievement.