BACKGROUND: The main purpose of this study was to identify and understand the structure of latent traits underlying the concept of medical professionalism of Taiwanese students. METHODS: A 32 item questionnaire assessing medical professionalism derived from the definition by the American Board Internal Medicine (ABIM) was distributed to 133 year seven medical students. A five-point rating scale of importance was used to identify the extent of their values or beliefs in each item. RESULTS: The three items perceived most important were: accountability to patients, respect for patients and their families; and integrity and prudence. The least important component underlying professionalism was 'enduring unavoidable risks to oneself when a patient's welfare is at stake'. Factor analysis resulted in eight factors: 'commitment to care' (factor 1); 'righteous and rule-abiding' (factor 2); 'pursuing quality patient care' (factor 3), 'habit of professional practice' (factor 4); 'interpersonal relationship' (factor 5); 'patient-oriented' issues (factor 6); physician's 'self-development' (factor 7); and finally, 'respect for others' (factor 8). Most of the variance was contributed by factor 1 (34.9%). The mean score of factors ranged from 3.84 (factor 1: commitment to care) to 4.7 (factor 8: respect of others), and the reliability alphas ranged from 0.86 to 0.66. CONCLUSIONS: These results of young physicians' professional values have implications for medical school curriculum for improvement.