



Intrinsic component of resilience among entry level medical students in the United Arab Emirates

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RESEARCH

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Abstract

Background

Resilience is the capacity to recover and to cope successfully with everyday challenges. Resilience has intrinsic and extrinsic components and an effort has been made to study the intrinsic component and its association with socio-demographic factors, among the entry level students of the Integrated Bachelor of Medicine and Bachelor of Surgery (MBBS) course.

Method

The present study was conducted in Gulf Medical University, using a self-administered questionnaire,

comprising of two parts, distributed to all the students who consented to participate. The first part contained questions on socio-demographic details while the second part contained questions on the intrinsic and extrinsic components of resilience of the students. The data collected was analysed using Predictive Analytic Software (PASW) 18.0 using frequency, mean, SD and median.

Results

Among the 58 students who participated 24 (41.4%) were males and 34 (58.6%) females, of which 70.7% were < 20 years and 29.3% ≥ 20 years. The mean score for the intrinsic component of resilience was 48.9 (SD, 5 and range 35–60). The median scores showed no significant variation ($p < 0.05$) with age, gender, religion, nationality, family structure, highest education among parents, the person they share their feelings with or the number of friends. However, minimally higher scores were noted in the median scores of students from nuclear families, with Western nationality and those whose parents had a university level education, who shared their feelings with people of their own generation or outside their family and who have 5–9 friends.

Conclusion

The intrinsic component of resilience was found to be almost uniform for the study group and the level is high. A study has to further look into its effect on coping with the stresses encountered during the academic year.



Keywords

Intrinsic component of resilience, medical students, socio-demographic characteristics, number of friends, sharing feelings.

What this study adds:

1. It is the first report on the level of the intrinsic component of resilience among entry level medical students in the UAE.
2. It highlights the importance of adequate emotional expression, supportive family relations, and good peer interactions in the development of intrinsic resilience.
3. Minimally higher scores of resilience were noted with more socially supported students while age, gender and nationality were seen not to affect the level of intrinsic component of resilience.

Background

Adolescence is a preparatory phase in life during which a developing individual progressively gains the skills and attributes necessary to become a productive and a reproductive adult¹. According to the World Health Organization definition, it spans from 10–19 years of age. Nearly all cultures recognize this phase in life and society acknowledges these emerging capacities of young people. One of the crucial attributes that shapes an adolescent is resilience¹.

Etymologically, the word 'resilience' comes from the Latin term 'salire' (to spring, spring up) and 'resilire' (spring back). This means that resilience can be regarded as the capacity to recover or spring back².

Resilience has been defined as the capacity of individuals, schools, families and communities to cope successfully with everyday challenges including life transitions, times of cumulative stress and significant adversity or risk.³ Resilient individuals have various strengths which, when coupled with environmental strength (physical and psychological), can be described as protective factors.⁴ Such individuals are recognized by their high self-esteem, internal locus of control, optimism and clear aspiration, achievement, goal orientation, reflectiveness and problem-solving capacity, respect for the autonomy of themselves and others, healthy communication patterns and the capacity to seek out mentoring adult relationships.⁵⁻⁶

Research shows, a combination of supportive parenting and firm parental control is associated with social competence as well as academic competence in adolescents.⁷ The importance of warm and responsive child-parent relationships can protect an adolescent from negative consequences, and they can also benefit from the family constitution and supervision.⁷ Healthy youth feel strongly connected with their families as they feel understood, loved, wanted, and receive attention from family members.⁸

Research affords three identifiable characteristics of resilience which may help persons manage stressful or traumatic situations:

1. The ability to create a context of meaning, thereby helping the objective analysis of a situation.
2. A sense of intimacy and connectedness to the world, helping to interact with and understand people.
3. A level of mental and emotional flexibility, enabling individuals to adapt to new and challenging situations in an easy manner.⁹

Resilient individuals have been described as able to manipulate and shape their environment, to deal with life pressures successfully, and to comply with its demands. They are able to adapt quickly to new situations, perceive clearly what is occurring, communicate freely, act flexibly, and view themselves in a positive way. They are able to tolerate frustration, handle anxiety, and ask for help when required, as compared to vulnerable individuals. Research shows resilient individuals do not simply avoid risk and negative outcomes¹⁰⁻¹¹. They also display more adequate adaptation when facing difficulty. Additional characteristics include higher levels of autonomy, independence, empathy, task orientation, curiosity, good problem-solving skills, and good peer relationships.¹²

Resilient individuals always say three words that show their capability to face the problems. They often use words that reflect self-confidence such as 'I have', 'I am', and 'I can'. When an individual says 'I am', it implies their intrinsic factors which are internal and personal strengths, and beliefs within them¹³. They are lovable, empathetic and altruistic and proud of themselves. They are also autonomous and responsible in their actions and tasks. They are filled with hope, faith and trust. An individual who says 'I have' shows their external support and resources



that promote resilience. Before the individual is aware of who they (I am) or what they can do (I Can), they need external support and resources to develop the feelings of safety and security that lay the foundation for developing resilience. This includes trusting relationships, discipline at home, role models, and access to health, education and welfare.^{5, 14,15} Individuals who confidently say 'I can' reveal their social and interpersonal skills. These qualities are learnt by interacting with others and from those who teach them. They communicate well with others, solve their problems, and manage their feelings and impulses. They also seek trusting relationships.¹³

It has also been shown that environments providing low emotional support, lack of availability of attachments and low perceived adequacy of support from parents/caregivers, teachers and other adults and peers are strongly linked to mental illnesses such as depression^{5, 14}.

Developmentally, resilience has been shown to be cultivated by focusing on four areas: spirituality, mental well-being, emotional well-being and physical well-being¹⁶. The factors that influence the development of resilience include:

1. Personal and emotional factors, such as emotional well-being, spirituality and self esteem¹⁷⁻¹⁸.
2. Family factors, including household composition, parents' education and relationship with their children⁷.
3. Social and cultural factors, including economic standing and community involvement¹⁹⁻²⁰.
4. School factors, relating to their perceptions of school and relationships with teachers^{8, 21}.

Intrinsic factors such as self-esteem, self-efficacy and internal locus of control determine resilience in individuals. The impact of these intrinsic factors on resilience varies with the developmental stage and gender of an individual. However, the locus of control is a consistent factor in resilience, especially in those with adept problem-solving skills.²² Connor (2006) has defined resilience as a way of measuring the ability to cope with stress. Here, resilience describes the personal qualities that make it possible for individuals and communities to grow and even to make headway in unfavorable circumstances. Resilience can

therefore be regarded as a way of measuring emotional stamina.²³

Students enrolling into the MBBS programme at Gulf Medical University (GMU), UAE, join after grade 12 of schooling, the average age being 17–19 years. They come from multi-ethnic backgrounds and possess varied social experience and cultural exposure. These factors influence the personal strengths of an individual and therefore the intrinsic component of resilience varies.^{7,19,20} Medical education by its very nature poses tremendous stress on a student.^{24,25} An attempt was made to see if there is an association of the level of education in the family to the resilience of the individual and to look into the individual's intrinsic factors, that help the individual's performance, at the entry level as they enter into the rigors of the academic year. This study is meant to serve as a platform to further investigate its effect on the health and academic performance later in the course of their study and to identify the mentoring needs of the entry year students to enrich the preceptor programme.

Method

After approval from the University Ethics Committee, the present study was conducted on entry level students of the MBBS course at College of Medicine, Gulf Medical University, using a self-administered questionnaire developed by the research team reviewing available literature and questionnaires, and discussions with experts in the field of psychology and behavioral sciences. It comprised of two parts; the first part contained questions pertaining to socio-demographic details, including the age and gender of the students, their previous educational background, the structure of their families, the education of their parents and the number of close friends they have; the second part contained questions on the intrinsic and extrinsic components of resilience of the students. The draft questionnaire was sent to experts in the field of psychology, community medicine and research, for face and content validation. The suggestions were incorporated and approved by the experts before finalizing the same.

The final 16 questions on the intrinsic component comprised of items on perception of personal strengths and attitudes. After explaining the purpose of the study and



obtaining verbal consent to participate, the questionnaire was administered during regular class hours.

Table 1: Variations in the intrinsic component of resilience with socio-demographic characteristics

Socio-demographic characteristics		N	Mean ± SD	Median
Age (in years)	<20	41	48.73 ± 4.59	49
	≥ 20	17	49.35 ± 5.93	49
	Total	58	48.91 ± 4.97	49
Gender	Female	34	48.91 ± 4.94	49
	Male	24	48.92 ± 5.13	49
	Total	58	48.91 ± 4.97	49
Religion	Islam	53	49.17 ± 5.04	49
	Christianity	3	46.0 ± 4.36	48
	Hinduism	2	46.5 ± 3.53	46.5
	Total	58	48.91 ± 4.97	49
Nationality	Middle East	30	48.87 ± 4.43	49
	Western	11	49.54 ± 6.77	51
	Asian	15	48.6 ± 4.56	49
	African	2	48.5 ± 9.19	48.5
	Total	58	48.91 ± 4.97	49

The items were scored on a five point Likert scale from strongly agree (5) to strongly disagree (1) which gave a maximum score of 80 and minimum of 16. Those who scored above three agreed to the statements and so were considered to contribute to resilience. Therefore a total score above 48 was taken as high resilience.

The data obtained was entered into Microsoft Excel and transferred for analysis using PASW18.0. The data was analysed using frequency, mean, SD and median. The Mann Whitney U test was applied to ascertain the significance of the scores, p <0.05 was taken as the level of significance. The current report presents the scores for the intrinsic component of resilience and its association with the socio-demographic characteristics of the study group.

Table 2: Variations in the intrinsic component of resilience with family characteristics

Family characteristics		N	Mean± SD	Median
Family structure	Non-nuclear family	9	48.67± 3.71	48
	Nuclear family	49	48.96± 5.2	49
	Total	58	48.91± 4.97	49
Father's education	12+ grade	49	48.71± 5.07	49
	<=12 th grade	9	50.0 ± 4.5	50
	Total	58	48.91± 4.97	49
Mother's education	12+ grade	47	48.36 ± 4.91	49
	<=12 th grade	11	51.27± 4.78	50
	Total	58	48.91± 4.978	49

Results

Fifty-eight students enrolled in the first year MBBS course participated in the study. 24 (41.4%) males and 34 (58.6%) females; 70.7% were < 20 years of age and 29.3% ≥ 20 years. The mean score for the intrinsic component of resilience was 48.9 with a SD of 5 and a range of 35–60.

The median score by both age and gender was 49.0 for the study group. The variation in the median scores in the intrinsic component of resilience with religion ranged from 46.5 to 49.0; and nationality from 48.5 to 51. The subgroups of students following Christianity and Hinduism had lower median scores (Table 1).



The variations in the median scores in the intrinsic component of resilience with type of family structure ranged from 48.0 to 49.0 and with level of education of both parents ranged from 49.0 to 50.0 (Table 2).

Table 3: Variation in the intrinsic component of resilience with the persons they share their feelings

Share feelings with	N	Mean ± SD	Median
Nobody	12	49±5.78	49
Elder in family	20	48.3±3.85	48.5
Same Generation	12	49.08±5.02	50
Outside	14	49.57±6.01	50
Total	58	48.91±4.97	49

Table 4: Variation in the intrinsic component of resilience with the number of friends they have

No. of friends	N	Mean ± SD	Median
No friends	7	45.43±4.47	45
1 - 4	22	49±3.8	49
5 - 9	20	49.65±5.6	50.5
>=10	9	49.78±5.99	49
Total	58	48.91±4.97	49

The variations seen in the median scores in the intrinsic component of resilience with persons they share their feelings with, ranged from 48.5 to 50.0 (Table 3). Higher scores were observed for those who shared their feelings with peers or those outside their family. The lowest scores were seen in those with no friends and the highest in those with five to nine friends (Table 4).

Discussion

Students enrolling into the MBBS programme at College of Medicine in Gulf Medical University, UAE, join after grade 12 of schoolings, the average age being 17–19 years. They come from multi-ethnic backgrounds with varied social experience and cultural exposure, influencing the personal strengths of an individual and therefore the intrinsic component of resilience differently. Therefore the present study made an attempt to look into the individuals' intrinsic factors that might help or deter them from coping with the stress of the academic programme. It aimed to identify

groups with low resilience that may need to receive special attention in the preceptor programme for entry year students.

It is encouraging that the level of intrinsic component of resilience is found to be high (49), as the total median score is above 48.

The median scores did not show any significant variation with age, gender, religion, nationality, family structure, and education of either parent, the person they share their feelings with or the number of friends. It is different from the report of a retrospective study which showed that girls are almost twice as resilient as boys.^{26,27} A review conducted by Barrow et al. showed that racial identity played an important role in determining the resilience of an individual, stemming from their cultural identity, pride and community support system.²⁸ Religion is also found to be a protective factor against adversities and may help in fostering a higher resilience.²⁹ In our study the low scores seen in students following Christianity and Hinduism cannot be commented upon as the number is very small (3 and 2 respectively).

Though not significant, minimally higher values were noted in the median scores of students from nuclear families, with Western nationality and those whose parents had a university level education, who shared their feelings with people of their own generation or outside their family and who has five to nine friends.^{12,32} Studies have shown that supportive relations provided by family and friends and also from the work environment and sports teams, societies and groups that the individual may be attached to, help in building the confidence and problem-solving capabilities of an individual thus increasing the resilience.²⁹

A panel study conducted showed that children of educated parents were 70% more likely to be resilient than others as was the active involvement by the parent in the education of the child³⁰. Socially competent children who show a high regard for their relationships with family and friends, are more resilient. However, one study interestingly concluded that children labeled as resilient are significantly more depressed and anxious than competent children from low stress backgrounds.³¹



The sample size in this study was small and included only medical students, the results therefore cannot be generalized to other student populations.

Conclusion

The intrinsic component of resilience was found to be almost uniform for the study group and the level is high. A study has to further look into its effect on coping with the stresses in the new academic programme. Adequate emotional expression, supportive family relations, good peer interactions, and prosociality being the main indicators of resilience, further investigation is needed to explore the possible effects of these factors.

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CONFLICTS OF INTEREST

The authors declare that they have no competing interests

ETHICS COMMITTEE APPROVAL

University ethics committee