

Learning Communities: Improving Imposter Syndrome and Loneliness Among Medical Students



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INTRODUCTION

Learning Communities (LCs):

The overall structure of LCs generally involves professionalism training, leadership development, as well as service-learning components. Participation in LC activities is associated with improved formation of connections between students and a more positive perception of the overall learning environment. Furthermore, LC's have been shown to increase academic achievement, satisfaction, and involvement among students.

Loneliness and isolation:

Loneliness is widespread among college students, however, a positive trend shows that participation in an LCs improved academic engagement, attendance, performance, and overall greater student satisfaction with their college experience. LCs provide means for medical students to feel more connected to their institution, faculty, and peers and thus feel less isolated. LCs that combine mentoring, advising, social activities, and peer support have been shown to improve student well-being and decrease isolation. Of note, there is inconsistent data in regarding associations between gender and loneliness.

Imposter Syndrome (IS):

IS represents a feeling of self-doubt propagating beliefs that one's achievements are unjustified which can result in an unfounded fear of being discovered as a "fraud" or "imposter". Medical students with IS experience: higher rates of burnout, reduced academic success, heightened psychological distress, lower self-esteem, decreased self-efficacy, and increased incidence of academic dishonesty. There is a relationship between IS and loneliness, however, IS has an inconsistent relationship with gender.

Locus of Control:

Individuals can have an internal locus of control, where they believe that they, themselves, determine outcomes in their life; or an external locus of control, where outcomes are viewed as consequences of outside forces beyond the individual's control. There is significant variation in the literature regarding whether there is an association between gender and locus of control, however prior research has indicated that having an external locus of control is associated with greater likelihood of experiencing loneliness and IS.

The Current Study:

It has been four years since the initial formation of the Wayne State University School of Medicine (WSUSOM) LCs and to date, the impact and effectiveness of WSUSOM LCs remains unclear. As such, the importance of this study is to evaluate the overall effectiveness of the LCs at WSUSOM, that is, are they working? Our goal is to determine whether involvement in WSUSOM LCs is associated with an identifiable reduction in medical student's feelings of loneliness, isolation, and IS. We, therefore, predict that medical students who are actively engaged with their LCs by attending greater numbers of LC-sponsored events will be more likely to experience greater social support and decreased feelings of loneliness and isolation, as well as, decreased occurrences and severity of the impostor syndrome phenomenon.

In summary, we hypothesize that students:

1. Who attend more Learning Community events will score lower on imposter syndrome scale.
2. Who attend more Learning Community events will score lower on social loneliness scale.
3. Who have scored higher on imposter syndrome will have an external locus of control.
4. Who have scored higher on social loneliness will have an external locus of control.

METHODS

- Participants: 144 participants were recruited from WSUSOM
- Measures:
 - Demographics: age, gender, starting year, LC color, number of LC and non-LC social and educational events attended.
 - Chance Imposter Phenomenon Scale
 - UCLA Loneliness Scale
 - Rotter's Locus of Control Scale
- Procedure:
 - Recruitment and Consent
 - Survey: Measures
 - Debrief

RESULTS

- Females were more likely to attend non-LC social events, have an external locus of control, and slightly harbor more feelings of IS than males, as represented in Table 1.
- Having an external locus of control lead to an individual having greater IS feelings (as seen in Table 2).
- The lonelier an individual felt, the less likely they were to feel IS, and the more non-LC social events they attended (as seen in Table 2).
- There were no significant correlations between LC events attended and imposter syndrome scores, loneliness scores, and locus of control (as seen in Table 2).

TABLE 1: T-TEST DESIGN ON GENDER'S RELATIONSHIP WITH VARIABLE

Variable	T-test	df	p
Age	0.196	133	0.845
LC Events Attended	.352	141	0.725
Non-LC Social Events Attended	-2.195	141	0.030*
Non-LC Educational Events Attended	-0.171	140	0.865
Locus of Control	-2.735	127	0.007**
Imposter Syndrome	-1.774	139	0.078
Loneliness	0.773	139	0.441

TABLE 2: CORRELATIONS MATRIX OF EVENTS ATTENDED AND SCALES

	LC Events Attended	Non-LC Social Events Attended	Non-LC Educational Events Attended	Events Total Attended	Locus of Control	Imposter Syndrome	Loneliness
LC Events Attended	-	-	-	-	-	-	-
Non-LC Social Events	0.330***	-	-	-	-	-	-
Non-LC Educational Events	0.111	0.451***	-	-	-	-	-
Events Total Attended	0.587***	0.840***	0.767***	-	-	-	-
Locus of Control	0.057	0.023	-0.171	-0.054	-	-	-
Imposter Syndrome	0.038	-0.047	-0.004	-0.012	0.212*	-	-
Loneliness	0.103	0.186*	-0.105	0.076	0.031	-0.492***	-

Note: One asterics (*) indicates a p-value <0.05, two asterics (**) indicate a p value <.01, and three asterics (***) indicates a p-value <0.001.

CONCLUSION

•In summary, this study coincides with past research with the connection between gender and IS, loneliness, and external locus of control, however, contradicts past research on the connection between imposter syndrome and loneliness. Of note, this study fails to affirm that LCs decrease feelings of loneliness and imposter syndrome.

- **Strength:** Sample size includes members from multiple classes and pre-existing scales were used to evaluate locus of control, loneliness and IS.
- **Weakness:** Shortened version of the Rotter's Locus of Control Scale was used, small sample size, students were not required to complete survey thus the views of those who elected to participate may in fact represent more polar ends of the spectrum, lastly the pandemic may have altered students views of LCs and their effectiveness due to long lasting restrictions.
- **Future Research:** Our study indicates that LCs may not be as effective as we had thought they were. Future research can evaluate whether or not COVID19 had any impact on the reported effectiveness as well as if random mandatory assignment to various communities is the most effective way of fostering the formation of cohesive teams and establishing peer support. It may be worthwhile to explore medical students unique perspectives on what they feel would be most beneficial to their educational experience.