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Resident Assistants' Leadership Efficacy

SERVING AS A RESIDENT ASSISTANT can have a positive effect on students' leadership efficacy. We used propensity score matching techniques to develop a treatment group of resident assistants and a matched control group of students who did not serve as resident assistants. Our covariates included pre-college leadership efficacy, demographics, and other collegiate experiences. The results suggest that resident assistants had significantly higher leadership efficacy than did their matched group of peers.

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Resident assistants (RAs) play an indisputably important role in college and university housing by helping residents connect with campus resources (Servaty-Seib & Taub, 2010), socialize and develop relationships with other students (Manata et al., 2017; Roland & Agosto, 2017), and become integrated within the greater college community (Blimling, 2010). They also promote better university outcomes by facilitating students' engagement and retention through programming (Soria & Taylor, 2016) and by imparting university values and promoting student learning outcomes (Healea, 2006). While much is known about how RAs contribute to their institutions, little is known about the developmental outcomes that they gain through their experiences (Martin & Blechschmidt, 2014). Specifically, even though leadership is often an implicit expectation or explicit requirement in RAs' position descriptions (Benjamin & Davis,

2016), little is known about the potential for resident assistants to develop leadership outcomes from their paraprofessional training, interpersonal interactions or relationships, and leadership experiences.

The existing literature on RAs' leadership development has yielded somewhat discordant information about the potential leadership benefits derived from serving in this role. Martin and Blechschmidt (2014) discovered that RAs are significantly more likely than are their non-RA peers to develop self-awareness of their values, attitudes, and beliefs, which motivates them to take action; however, they also found that RAs were not more likely than were their non-RA peers to develop other measures of socially responsible leadership or intercultural effectiveness. Early (2016) found that resident assistants who received mentorship reported higher levels of leadership capacity and socially responsible leadership than did RAs who

did not receive mentorship, yet nearly 96% of the sample of RAs had received mentorship, making comparisons of mentored and non-mentored RAs challenging.

Although there is significant value in studying college students' leadership capacity and development of socially responsible leadership (Astin & Astin, 1996; Dugan & Komives, 2007), scholars have also documented the importance of leadership efficacy as an outcome that can unleash several attendant benefits in college students' leadership development. Leadership efficacy represents individuals' confidence in their capacity to lead (Dugan et al., 2013), and it can motivate them to efficaciously pursue complex challenges, mobilize others to undertake collective action, and influence social or organizational change (Avolio & Luthans, 2006; Chemers et al., 2000; Hannah et al., 2008). Leadership efficacy is positively associated with not only individuals' leadership capacity (Dugan & Komives, 2010) but also the frequency with which they attempt to serve as leaders (McCormick et al., 2002). Additionally, leadership efficacy is associated with leaders' performance (Paglis, 2010; Paglis & Green, 2002) and groups' collective performance (Hoyt et al., 2003; Paglis, 2010; Watson et al., 2001).

The concept of leadership self-efficacy is derived from Bandura's (1977) social cognitive theory and construct of self-efficacy. Self-efficacy, or the belief that one can successfully engage in actions to produce outcomes, influences not only individuals' likelihood of initiating tasks, but also their stamina and tenacity in following through on those tasks (Bandura, 1977, 1982, 1997). Self-efficacy is malleable (Bandura, 1977) and can be influenced through interventions, such as increasing individuals' awareness of the complexity of tasks and improv-

ing their abilities to perform tasks through training (Gist & Mitchell, 1992). Efficacy beliefs are derived from personal experiences (McCormick et al., 2002); therefore, resident assistants may develop increased leadership efficacy from their training, experiences working as a paraprofessional alongside student affairs professionals, relationships with other student leaders, and experiences serving as leaders in their residences.

Researchers have left breadcrumbs leading toward the potential impact that serving as a resident assistant has on students' leadership efficacy. For instance, Benjamin and Davis (2016) discovered that the RAs interviewed in their study reported greater self-efficacy—confidence in their abilities as a resident assistant and increased overall self-confidence—through enhanced self-awareness, which was also mirrored in Martin and Blechschmidt's (2014) study. Early (2016) found that RAs who were mentored by student affairs professionals had significantly greater leadership efficacy than did their non-mentored peers; however, Early did not compare RAs with students who were not RAs, leaving a void in terms of understanding whether serving in a resident assistant capacity in and of itself is associated with leadership efficacy.

Due to the aforementioned limitations and lack of literature, the purpose of this paper is to examine whether resident assistants have a significantly different leadership efficacy than do their peers who are not resident assistants. A persistent shortcoming in the existing research on the impact of college students' participation as leaders is the potential presence of self-selection biases (Soria & VeLure Roholt, 2018; Soria & Werner, 2018; Soria et al., 2019). In other words, the characteristics and prior experiences that compel students to serve as RAs

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may contribute to systematic differences between RAs and their peers; for instance, students who already possess high leadership efficacy may apply to be RAs given their high confidence, while students with lower leadership efficacy may not apply for those positions given a lack of confidence in their abilities. Comparisons of resident assistants and non-resident assistants may therefore show effects that are not attributed to the actual experience of serving as an RA but are instead attributed to students' pre-resident assistant characteristics, experiences, efficacy, and beliefs. Those systematic differences may contribute to differences in students' outcomes, so researchers should account for those differences when estimating the effects of experiences on outcomes (Austin, 2011).

To address the limitations of prior research, we used quasi-experimental procedures known as propensity score matching techniques to construct control groups (students who were not resident assistants) and treatment groups (resident assistants) similar to those found in randomized experiences. We matched students on their demographics, pre-college leadership efficacy, pre-college leadership experiences, and additional collegiate experiences to reduce the potential bias found within students' self-selection into resident assistant positions.

CONCEPTUAL FRAMEWORK

We employed two conceptual frameworks for this study: Gist and Mitchell's (1992) theoretical analysis of self-efficacy's malleability and Astin's (1993) input-environment-output model. Gist and Mitchell proposed that

self-efficacy can be changed through increased experiences with tasks, frequent feedback, and training. Astin hypothesized that the background characteristics of college students (inputs) and relevant aspects of the college experience (environment) influence students' outcomes. Our analyses utilize Astin's theory by taking students' inputs and experiences into account when considering the self-selection biases of resident assistants and Gist and Mitchell's theory by including students' pre-college leadership and efficacy experiences as covariate measures.

METHODS

In this paper, we investigated whether students' participation as a resident assistant has an effect on their leadership efficacy. In the sections that follow, we describe the survey instrument used to collect students' information, the sample of college students we utilized in analyses, the measures we utilized in our statistical model, and the procedures we employed to analyze our data.

Instrument

We utilized data collected as part of the Multi-Institutional Study of Leadership (MSL), which was administered at eight of the 14 Big Ten Coalition universities in spring 2018. The MSL is an international research program that examines the influence of higher education on undergraduates' leadership development (Dugan, 2015). The MSL survey measures a variety of leadership-related outcomes, including students' engagement in a variety of leadership experiences, pre-college experiences and perceptions, demographic characteristics, capacities for

socially responsible leadership, and leadership efficacy. The MSL survey has also been used in a number of studies related to students' experiences in residence life and housing (Early, 2016; Manz, 2019; Soria & Roberts, 2021). Researchers tested the psychometric properties of the MSL instrument and discovered that common concerns related to self-reported data—social desirability, halo effect, and item format—were not problematic in the MSL (Dugan, 2015; Tyree, 1998). Additionally, researchers who examined the MSL for content, criterion, and construct validity made several changes to improve those psychometric properties, including reducing the number of items and removing two constructs (Dugan, 2015; Tyree, 1998).

Sample

In spring 2018, eight of the 14 Big Ten institutions participated in the MSL, and each invited 4,000 randomly selected students to participate in the survey. The response rate was 22.8% ($n = 7,298$). Within the sample, 226 students indicated that they had participated as a resident assistant at some point during college. We matched those 226 resident assistants with 226 students who reported never serving as resident assistants, resulting in a final sample of 452 students used in analyses. The descriptive statistics for the final file are shown in Table 1.

Measures

Independent measure. Our primary independent variable included whether students had ever participated as a resident assistant during college (1 = yes, 0 = no).

Covariate measures. We utilized several measures as covariates in propensity score matching. The measures we selected are known to have relationships with students' participation in leadership experiences, which we used as a proxy for serving as a resident assistant, given an absence of research on the variables associated with serving as a resident assistant. Researchers have discovered that students' high school leadership experiences are associated with their collegiate experiences (Komives & Johnson, 2009; Soria et al., 2013); therefore, we included how often students participated in leadership positions in student clubs or organizations and in community organizations or work-related groups in high school (0 = *never* to 3 = *very often*) and their pre-college leadership efficacy. We measured students' pre-college leadership efficacy through four items in which students indicated their level of confidence (1 = *not at all confident* to 5 = *very confident*) in leading others, organizing a group's tasks to accomplish a goal, taking initiative to improve something, and working with a team on a group project. We used factor analysis to develop the pre-college leadership efficacy variable (as explained below).

We also included demographic covariate measures including students' self-reported gender, age, race/ethnicity, transfer status, and first-generation status (Dugan, 2006; Dugan & Komives, 2010; Soria et al., 2014). Furthermore, we used whether students lived on campus, their academic majors, and self-reported grade point averages as additional covariates (Soria et al., 2014). Finally, we included additional measures of leader-

Resident assistants enact leadership on a daily basis as they wrestle with complex tasks such as community development, conflict resolution, mediation, policy enforcement, and developmental programming.

TABLE 1

Covariates Used in Analysis

	<i>n</i>	%
Man	189	41.8
Woman	258	57.1
Transgender/gender non-conforming	5	1.1
African American/Black	49	10.8
American Indian/Alaska Native	1	0.2
Asian American	83	18.4
Latino/Hispanic	31	6.9
Middle Eastern/Northern African	13	2.9
Multiracial	11	2.4
Native Hawaiian/Pacific Islander	2	0.4
Race not listed	31	6.9
White/Caucasian	231	51.1
Started at their institution (non-transfer)	392	86.7
Started elsewhere (transfer)	60	13.3
First-generation	67	14.8
Continuing-generation	385	85.2
Currently living on campus	289	63.9
Currently living off campus	163	36.1
Arts, Humanities, and Communication	94	20.8
Business	72	15.9
Education	4	0.9
Health Sciences	29	6.4
Natural and Physical Sciences	76	16.8
Social and Behavioral Sciences	62	13.7
Science, Technology, Engineering, and Mathematics	115	25.4
	<i>M</i>	<i>SD</i>
Age	20.42	2.04
Leadership positions in student clubs, groups, or sports (high school)	1.96	1.09
Leadership positions in community organizations or work-related groups (high school)	1.18	1.11
Held a leadership position in a college organization	2.27	1.54
Had been an involved member in an off-campus community or work-based organization	1.15	1.42

Self-efficacy, or the belief that one can successfully engage in actions to produce outcomes, influences not only individuals' likelihood of initiating tasks, but also their stamina and tenacity in following through on those tasks.

ship participation, including the frequency with which students held a leadership position in a college organization or had been involved as a member in off-campus community or work-based organizations (0 = *never* to 3 = *very often*).

Dependent measure. Our dependent measure included students' leadership efficacy, which we measured through four items in which students noted their confidence in leading others, organizing a group's tasks to accomplish a goal, taking initiative to improve something, and working with a team on a group project. The items were all scaled from 1 = *not at all confident* to 4 = *very confident*. We used factor analysis to develop the pre-college leadership efficacy variable (as explained below).

Data Analyses

We utilized propensity score matching techniques in SPSS 24.0 (Thoemmes, 2012) to match students in the treatment condition (resident assistants) with those in the control condition (students who were not resident assistants). We used binary logistic regression to compute propensity scores (the estimated probability that students participated as resident assistants) for individual students. Next, we used 1:1 nearest neighbor matching, meaning that each student in the treatment condition is matched to a student in the untreated condition who has the most similar estimated propensity score (Austin, 2011). We matched without replacement and discarded all units that fell outside the area of common support to avoid extrapolation to units that were so dissimilar that no comparisons

could be made to other units (Thoemmes, 2012). We imposed a caliper of .20 of the standard deviation of the logit of the propensity score to avoid inadequate matches (Austin, 2011). The result was a group of 226 resident assistants matched with 226 students who were not resident assistants.

Next, we utilized a factor analysis on the survey items to reveal latent variables that explain correlations between the variables (or dimensions). Traditional methods of exploratory factor analysis may overestimate or underestimate the true number of factors (Basto & Pereira, 2012). We therefore utilized Velicer's (1976) minimum average partial (MAP) method, parallel analysis (Velicer et al., 2000), and Raiche and colleagues' (2006) optimal coordinate (OC) method to estimate the factors (Courtney, 2013). We used the procedures outlined by Courtney (2013) to analyze the data using SPSS R-Menu v2.0 (Basto & Pereira, 2012). Velicer's MAP values suggested a two-step minimum squared average partial correlation, and parallel analysis suggested that two factors should be retained. Against a plot of eigenvalues, the OC procedures estimated that two factors should be retained. The goodness of fit statistics suggest that the factorial model had good fit ($GFI = .962$, $RMSR = .075$), so we retained the following factors: pre-college leadership efficacy ($\alpha = .868$) and leadership efficacy in college ($\alpha = .861$). We computed the factor scores using the regression method and standardized the scores with a mean of zero and a standard deviation of one.

Although the data utilized in this study are from multiple institutions—and, thus,

the students are nested within different contexts—we did not utilize hierarchical linear modeling techniques for analyses for several reasons. We computed the intraclass correlation coefficients, an estimate of the proportion of between-institution variance compared to within-institution variance, and discovered that the coefficients were less than .001, suggesting greater independence of observations in the different groups of institutions. Scholars utilizing the MSL survey in prior studies have similarly discovered nominal between-institution differences in their results (Dugan et al., 2013), suggesting that ordinary least squares regressions are sufficient analyses for the present project. Finally, we analyzed the data using ordinary least squares regression. We examined the relationship between our independent variable (participating as a resident assistant, *yes* or *no*) and our dependent variable (leadership efficacy).

RESULTS

After conducting the propensity score matching analysis, we examined whether the matching procedures balanced the distribution of variables in both the treatment and control groups by first reviewing the standardized mean differences (the mean differences between the two groups divided by the standard deviation of the control group) in the treatment and control groups before and after matching. We detected no large imbalances above .25 after matching, meeting the threshold suggested by Rosenbaum and Rubin (1985). We also examined the overall imbalance test (Hansen & Bowers, 2008) and found that no variables were significantly unbalanced after matching. Additionally, the measure developed by Iacus et al. (2009) was smaller in the matched sample than in

the unmatched sample. Our visual inspections of histograms of propensity scores pre- and post-matching suggested that the magnitude of standardized differences was reduced, and histograms of standardized differences of all terms pre- and post-matching suggested that the standardized differences post-matching were centered on zero and that no systematic differences existed after matching (Thoemmes, 2012). Therefore, the covariates within the treatment and control groups differed significantly before matching procedures were implemented, and the propensity score matching decreased bias by making the observed and treatment groups more similar with regard to their covariates.

After creating matched pairs of students, we examined the differences in students' leadership efficacy based upon whether they had served as a resident assistant (*yes* or *no*). The results of our analyses suggest that RAs had significantly higher leadership efficacy than did their matched group of peers who did not participate as resident assistants ($\beta = .265$, $p < .001$). Participation as a resident assistant explained 7.0% of the variance in students' leadership efficacy.

DISCUSSION

We found that resident assistants had significantly higher leadership efficacy than did a matched group of peers who did not serve as resident assistants. In other words, compared to their peers, RAs had significantly higher confidence in their ability to lead others, organize a group's tasks to accomplish goals, take initiative to improve something, and work with a team on a group project. While we hypothesize that some of the effects could be attributed to the intensive mentorship with student affairs professionals that often takes place in RA positions

(Early, 2016), we also believe that consistent opportunities to engage in leadership tasks, resident assistant training, and feedback also contributed to increased leadership efficacy (Gist & Mitchell, 1992). Resident assistants enact leadership on a daily basis as they wrestle with complex tasks such as community development, conflict resolution, mediation, policy enforcement, and developmental programming (Benjamin & Davis, 2016; Blimling, 2010; Winston & Fitch, 1993). The more frequent opportunities to develop a vision, ask individuals to join collective action, strategize, and engage groups in executing tasks may lead RAs to develop higher leadership efficacy given the constant stream of leadership opportunities available in their positions.

The results of this study have several implications for housing and residence life staff. For instance, as they seek to recruit new RAs, housing and residence life staff can highlight the potential benefit of increased leadership confidence. Such a step can better name potential learning outcomes associated with the RA position and can also contribute to RAs' understanding of the value of the role (Benjamin & Davis, 2016). If framed as a formal developmental outcome associated with serving as a resident assistant, housing and residence life staff can also provide feedback on students' leadership efficacy development and draw attention to additional

opportunities that RAs have in increasing their leadership efficacy (Benjamin & Davis, 2016). Housing and residence life supervisors are uniquely positioned to witness RAs' leadership abilities and recommend additional ways in which they can engage in leadership in other areas of campus life.

We discovered that RAs have a higher degree of confidence in undertaking leadership tasks, working with others, and taking initiative compared to their peers—which also presents an opportunity for them to be effective leaders not only among their residents, colleagues, and residence life staff, but also in other areas of campus, community, and society. Manz (2019) found that RAs had higher levels of citizenship, a value in the social change model of leadership development in which individuals and groups become deeply connected to communities and societies in their work to create positive social change (Cilente, 2009). To reinforce those bonds, residence life staff can continue to promote community building and team development strategies, connect RAs to alternative leadership and engagement opportunities in their communities, and infuse their work with social justice and diversity, equity, and inclusion education. As a consequence, RAs may be positioned to extend their leadership capacities beyond the residence halls into other communities to facilitate greater social good.

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The results of this study further highlight the critical role that housing and residence life play in educating future leaders who can confidently and efficaciously engage in leadership tasks. Employers consistently rank leadership, initiative, the ability to work in a team, and interpersonal skills as attributes they seek on candidates' résumés (National Association of Colleges and Employers, 2018). Compared to their peers, RAs may possess more desirable qualities and attributes to meet the demands of today's workforce, a factor that only enhances the ongoing contributions of student housing on college and university campuses.

LIMITATIONS AND DIRECTIONS FOR FUTURE RESEARCH

There are many limitations to the present study that are important to address. For instance, our sample was derived from Big 10 institutions, thus limiting the generalizability of the findings to different types of institutions (e.g., small liberal arts institutions). Serving as a resident assistant only explained a nominal amount of variance in students' leadership efficacy, meaning that there are many additional variables associated with leadership efficacy not present in our limited model. Propensity score matching techniques present additional limitations; for instance, the selection of covariates in the logistic regression is subjective, and the misspecification of the logistic model is common (King & Nielsen, 2016). Furthermore,

propensity score matching reduces the sample size of participants for the outcome analysis, sometimes introducing potential bias in the final models (Peikes et al., 2008). Finally, while we implemented propensity score matching to address self-selection bias in applying for—and achieving—employment in the resident assistant role, the generalizations derived from self-selection in response to a survey must also be factored into cautious interpretations of the results.

Some of the limitations present opportunities for future research; for instance, we encourage researchers to expand their scope beyond Big 10 institutions (which are very large, research-intensive schools) into different institutional types to enhance the potential generalizability of the results. Furthermore, as recommended by Manz (2019), researchers could expand the analyses by adding variables such as the years of service in the RA position, the specific job responsibilities of the RAs (which can vary across the different institutions), or other variables like burnout in the RA role (which could affect the outcomes achieved in the position). Researchers are also encouraged to engage in qualitative studies related to the leadership outcomes of serving as a resident assistant to further unpack the many ways in which RAs develop their leadership capacities or connect with their supervisors, colleagues, or residents, who can also provide additional insights into resident assistants' leadership development (Manz, 2019).

CONCLUSION

The results of our study suggest that resident assistants had significantly higher levels of leadership efficacy than did a matched group of students who were not resident assistants. We encourage housing professionals to extol and promote the leadership outcomes

derived from serving as a resident assistant, and we encourage researchers to further investigate the developmental outcomes of students who serve in this critical role on college and university campuses. ■

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DISCUSSION QUESTIONS

1. The authors quote a study by Bandura (1997) saying that “self-efficacy is malleable.” Reflecting on this, how has your program influenced students' self-efficacy?
2. The authors used Gist and Mitchell's (1992) theoretical analysis of self-efficacy malleability and Astin's (1993) input-environment-output models. How do these two models help inform the experience of equity-deserving students?
3. The authors utilized data from the Multi-Institutional Study of Leadership survey, and they cite concerns with generalizability. How does this use of the data impact the validity of this study for students at your institution?
4. Did anything in the study surprise you? If so, discuss.
5. The authors mention that future research could look at expanding the analysis by adding variables. What other variables would you suggest future research focus on?

Discussion questions developed by Tracey Mason-Innes, Simon Fraser University in Burnaby, British Columbia.