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ARTICLES

From the President

Welcome to Issue 55 of the Virginia Social Science Journal. We are publishing in the Spring of 2022 and it has been a tumultuous 14 months since our last volume. The world has been overwhelmed by two years of the COVID-19 pandemic. Domestic and international political unrest continues to bring danger and uncertainty to all people. Social injustice permeates our culture. "Fake news" and facts somehow coexist when they should be consolidated into clear and honest truth. And somehow, we have been able to teach our students, engage in our research, and do service to our schools, institutions, and communities. For all of your efforts to carry on under these relentless circumstances, I thank you. As President of the Virginia Social Science Association for the entire pandemic, I am honestly awed and impressed at the work of my colleagues and students, within the VSSA and across our common interests. VSSA was forced to cancel our 2020 Research Conference and convened our first virtual conference in 2021. Within all of the difficulties in doing our business, it has been uplifting to see how people persevere. Obviously, the safety of our students and scholars will continue to guide our decisions. We will hold our 2022 conference online, but are very hopeful that 2022-2023 brings us back to our in-person annual meeting and conference—where many of YOU will present the research that may well make it into the VSSJ. To the Volume 55 contributors, thank you very much. Your work represents what I have described: perseverance under the most suboptimal conditions. These efforts constitute the best of what we do; bravo!

To the manuscript reviewers who gave their time to read submissions and provide expert reviews, guaranteeing our journal as a truly peer-reviewed body of scholarship; thank you all so very much. Many, MANY thanks to the journal editors Beverly Colwell Adams, Judi Anne Caron Sheppard and especially the editor-in-chief, Ayana Conway. They have brought this issue in on time and in fantastic shape. Finally, to the VSSA Board, those outgoing members and the body of officers taking the reigns next year; thank you colleagues for keeping me on my toes for the last two years. I would have never imagined what my time would look like, but I have such great support…I don't know how we would have made it without your efforts.

Until we are all back together, I repeat my mantra of the past months; be well, stay safe, and be aware of those who are hurting and in need.

Sincerely and with best regards,

Christopher J. Saladino, President, VSSA

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Message from the Editorial Board 2021-2022

Welcome to Issue 55 of the Virginia Social Science Journal, 2021-2022. It is Spring, 2022, in a world still in-the-midst-of continuing problems, both national and international concerns. While we move toward possible recovery from the pandemic (COVID-19) we lived through the omicron and delta variants, but now face war in Ukraine. The VSSA 2020 conference was canceled guided by our concern for the safety of our students and scholars. The Virginia Social Sciences Association leadership persisted and organized a successful 2021 VSSA virtual conference. Many thanks to those participants. Despite numerous COVID-related difficulties, we publish this 2021-2022 volume now. We offer our appreciation to the authors included in this volume, for their continued focus on academic research. We also send heartfelt appreciation to the peer reviewers, professionals who served as referees during VSSJ's double-blind review process. May the research continue.

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Fueling an Epidemic: An Explanatory Study of Mental Health and Alcohol Use Contributing to Prescription Pain Reliever Misuse

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Fueling an Epidemic: An Explanatory Study of Mental Health and Alcohol Use Contributing to Prescription Pain Reliever Misuse

Abstract

The opioid epidemic as a social problem has increasingly received more attention from the mass media as well as the scientific community. Despite all this attention, substance use disorder involving prescription pain relievers affects roughly 1.9 million Americans annually. The purpose of this study was to understand the impact of mental health and risky behaviors such as alcohol use on propensity for prescription pain reliever misuse. The data for this study came from the 2013 National Survey on Drug Use and Health. A multivariate logistic regression analysis was conducted to examine the impact of depression, mental distress, social anxiety, and alcohol consumption on the likelihood of misusing prescription pain relievers. The study showed that certain mental conditions and alcohol consumption increase the propensity for prescription pain reliever misuse. The findings of the study suggest (1) future research is necessary to understand further the correlations among mental health, alcohol use, and pain reliever misuse; (2) that greater attention by all stakeholders to people's mental health history is a significant factor in affecting the aforementioned epidemic; and (3) that greater attention to people's willingness to participate in frequent alcohol consumption could significantly impact the epidemic. The findings in this study can potentially assist healthcare providers in safer prescribing practices as well as other practical applications. With a broader knowledge of conditions correlated to the misuse of prescription pain relievers, the medical community could engage in safer prescribing of this potent medication.

Keywords: Opioid misuse; mental health; substance abuse; comorbidity

Fueling an Epidemic: An Explanatory Study of Mental Health and Alcohol Use Contributing to Prescription Pain Reliever Misuse

Introduction

The U.S. has seen a steady increase in prescription drug abuse, especially opioids used for pain, since the mid-1990s (Center for Disease Control [CDC], 2020; Quinones, 2015). The aggressive treatment of pain as a chronic incurable condition has led to a large influx in availability of prescription drugs (Johnson, 1996; Lipari, Williams, & Van Horn, 2017). The U.S. alone accounts for 80% of the world's opioid supply and 99% of the world's hydrocodone supply (Manchikanti & Singh, 2008; Miller & Oberbarnscheidt, 2017). This epidemic cost insurers 72.5 billion dollars in 2007 (Volkow, Frieden, Hyde, & Cha, 2014). Though the problem of prescription drug abuse is not new to this country, the severity of the problem has reached new proportions (Compton & Volkow, 2006).

The abuse of this supply of pain reliever medication (opioids) demands the attention of the scientific community. Considering that Substance Use Disorder (SUD) is often related to specific mental health disorders and to alcohol use, this study proposes to analyze the relationship between these disorders, alcohol use, and opioid misuse. The specific disorders include depression, mental distress, and social anxiety. Such an understanding would offer health-care providers much needed information to assist with prevention and recovery. Thus, the purpose of this study is to examine the impact of depression, mental distress, and social anxiety as well as alcohol consumption on the likelihood of misusing opioids (i.e., use without a prescription or for a non-medical reason).

Literature Review

Opioids are natural, synthetic, or semi-synthetic drugs often intended for pain relief (CDC, 2021). Although drugs such as fentanyl and heroine are illicitly produced and distributed, many natural (e.g., morphine, codeine) and synthetic opioids (e.g., fentanyl, methadone) are used by physicians for treating pain at various stages (Drug Enforcement Administration [DEA], 2020; Jones, Viswanath, Peck, Kaye, Gill, & Simopoulos, 2018). While prescription opioids can be safely used under the close guidance and monitoring of a responsible physician (CDC, 2017), physician overprescribing as well as weak regulations on the prescription of opioids have contributed to the massive increase in opioid abuse, addiction, overdoses, and opioid-related fatalities in the early-2000s (Jones, et al., 2018).

Unfortunately, according to Nelson, Juurlink, and Perrone (2015), opioid abuse most commonly occurs through prescriptions from medical professionals. That is, patients who are prescribed opioids for pain often desire increased dosages, as the pain-relieving properties diminish as tolerance increases over time (Dumas & Pollack, 2008); moreover, oftentimes, people need or otherwise desire the effects of the opioids or become physically dependent upon prescribed opioids after physicians stop providing prescriptions, so they seek non-institutional avenues for acquiring opioids (Sehgal, Manchikanti, & Smith, 2012). Additionally, many people without diagnoses or pre-existing pain misuse prescription opioids, often receiving the opioids from friends, family members, or acquaintances who receive prescriptions from their physicians (Lipari et al., 2017). This study focuses on those who misuse prescription opioids, i.e., use them in ways that are not prescribed by a physician (Volkow, Jones, Einstein, & Wargo, 2019).

Depression & Opioid Misuse

With SUD being at the heart of the opioid epidemic (Volkow et al., 2014), certain traits people possess might make them more susceptible to prescription opioid misuse. Mood disorders, such as depression, often go hand-in-hand with prescription opioid misuse (Martins, Fenton, Keyes, Blanco, Zhu, & Storr, 2012). Studies have shown that individuals who take higher dosages of pain medication also report periods of depression more frequently than those who are taking a lower dosage (Hooten, Shi, Gazelka, & Warner, 2011; Merrill, Von Korff, Banta-Green, Sullivan, Saunders, Campbell, & Weisner, 2012). This relationship strongly suggests that those who struggle with depression are at a much higher risk of long-term pain reliever misuse (Braden, Sullivan, Ray, Saunders, Merrill, Silverberg, Rutter, Weisner, Banta-Green, Campbell, & Von Korff, 2009; Hooten et al., 2011). In fact, people who have never experienced any form of substance use in the past report pain reliever abuse to alleviate depressive symptoms (Grattan, Sullivan, Saunders, Campbell, & Von Korff, 2012). Those who may have initially received opioid prescriptions for the purpose of treating acute pain are far more inclined to take these opioids to treat the mental pain of their depressive symptoms as well (Grattan et al., 2012).

The use of these opioids in order to relieve mental pain provides a paradox for the user: the depressive symptoms often worsen as the frequency of self-medication increases (Braden, et al., 2009; Merill, et al., 2012). The user becomes dependent upon the opioids physically as well as mentally, which in turn can intensify the initial depressive symptoms (Brady & Sinha, 2005). Based on evidence that drug misuse is already significantly higher in individuals who report depression (Manchikanti, Giordano, Boswell, Fellows, Manchukonda, & Pampati, 2007), the following hypothesis is proposed:

> *H1:* Individuals who experience periods of depression are more likely to misuse prescription pain relievers non-medically than those who do not experience periods of depression.

Mental Distress & Opioid Misuse

Mental distress can manifest itself through a variety of psychiatric conditions such as suicidal ideations and manic-depressive episodes (Soloff, Lynch, Kelly, Malone, & Mann, 2000). These conditions, in turn, can also be linked to a highly-elevated risk of drug misuse (Grattan, et al., 2012; Hooten, et al., 2011; Manchikanti, et al., 2007; Martins, et al., 2012; Martins, Keyes, Storr, Zhu, & Chilcoat, 2009; Soloff, et al., 2000). Those who report a high level of mental distress in their life, often characterized by feelings of hopelessness, restless nights and low self-worth, are much more susceptible to develop SUD, generally (McCauley, Danielson, Amstadter, Ruggiero, Resnick, Hanson, Smith, Saunders, & Kilpatrick, 2010).

This same pattern is likely present with opioid misuse, specifically. A recent study on suicidality and prescription drug misuse found that those who displayed symptoms such as feelings of hopelessness and low self-worth showed some of the strongest correlations in prescription pain medication misuse (Zullig & Divin, 2012). The increased level of dopamine the opioid provides and the subsequent euphoric experience serves to diminish some of the mental pain that accompanies this level of distress (Khantzian, 1997). The opioid can provide relief from intense feelings of hopelessness and provide people with an acceptance of their environment that was not previously attainable in their distressed mental state (Khantzian, 1997). Accordingly, the following hypothesis is proposed:

> *H2:* Those who experience frequent mental distress in their lives are more likely to misuse prescription pain relievers than those who do not experience frequent mental distress in their lives.

Social Anxiety & Opioid Misuse:

Social anxiety disorder, i.e., an inability to perform daily tasks within one's social setting such as small talk with strangers, commonly correlates with substance use (Buckner, Schmidt, Lang, Small, Schlauch, & Lewinsohn, 2008; Daughters, Lejuez, Bornovalova, Kahler, Strong, & Brown, 2005; Kilpatrick, Ruggiero, Acierno, Saunders, Resnick, & Best, 2003). It often goes hand-in-hand with depressive episodes and can be linked to a variety of other forms of mental illness (Kilts, Kelsey, Knight, Ely, Bowman, Gross, Selvig, Gordon, Newport, & Nemeroff, 2006). Pharmacotherapy is often utilized in the medical community as a treatment for social anxiety disorder (Tan, Rudolph, & Lüscher, 2011). Though the medications administered for this condition have different chemical makeups and work differently in the body than opioids, both common anxiety medications and opioids are associated with higher concentrations of dopamine in the brain (Hyman, Malenka, & Nestler, 2006; Kilts, et al., 2006; Tan, et al., 2011).

Since prescription opioid abuse is easier to conceal than other forms of substance abuse, it becomes a convenient coping mechanism for individuals who experience emotional unrest in social settings (Botvin, Baker, Renick, Filazzola, & Botvin, 1984). The effects of the opioids impact people's perceived abilities to carry out social tasks. Those who suffer from social anxiety, resulting in an inability to connect with their social environment, can often feel low self-worth and other forms of more serious mental distress, increasing the likelihood that they are more susceptible to prescription pain reliever misuse (Martins, et al., 2012; McCauley, et al., 2010). This research supports the following hypothesis:

> *H3:* Those who experience social anxiety are more likely to misuse prescription pain relievers than those who do not experience social anxiety.

Alcohol Use & Opioid Misuse

Previous research provides evidence that periods of depression and other mental health conditions are strongly correlated with a propensity for alcohol use (Peirce, Frone, Russell, Cooper, & Mudar, 2000). Research also shows that individuals who use alcohol are more likely to abuse other substances (Fiellin, Tetrault, Becker, Fiellin, & Hoff, 2013; Stinson, Grant, Dawson, Ruan, Huang, & Saha, 2005). Given these correlations it is important to consider the sequence in which one can often begin with alcohol use and graduate on to prescription pain reliever misuse, as it may better develop and widen the understanding of this complex epidemic (Saunders, Von Korff, Campbell, Banta-Green, Sullivan, Merrill, & Weisner, 2012).

Alcohol use is a socially accepted and well-integrated aspect of our society (World Health Organization, 2018). Many people might enjoy alcohol socially; however, there is the potential of abuse, such as binge drinking and other problematic forms of alcohol use. Abuse is difficult to conceal; inebriation causes, for example, slurred speech, loss of balance, drowsiness, and behavioral changes. On the other hand, those who are susceptible to SUD may find prescription opioids a preferred alternative to alcohol because abuse of prescription pain medication is easier to conceal, at least initially. Recent studies have, in fact, shown a link between alcohol consumption, specifically, and a propensity for misusing prescription pain relievers (Esser, Guy Jr., Zhang, & Brewer, 2019; Witkiewitz & Vowles, 2018), which suggests support for the following hypothesis:

> *H4:* As the frequency of daily alcohol consumption per week increases, the likelihood of misusing prescription pain relievers increases.

Research Design

Data

The data for this study came from the 2013 National Survey on Drug Use and Health, conducted by the Substance Abuse and Mental Health Services Administration (SAMHSA), an agency within the U.S. Department of Health and Human Services which primarily measures the prevalence and correlates of drug use in the United States (Center for Behavioral Health Statistics and Quality, 2014). The study was conducted using the CAI method (computer assisted personal interviewing), and it covered individuals aged 12 and older (N=67,838). However, for the purpose of this study, the sample was reduced to people who were at least 18 years old (N=55,160).

Measures

The dependent variable used throughout this study was prescription pain reliever (opioid) misuse (See Table #1). The variable was measured using the following survey question: “Have you ever, even once, used any type of prescription pain reliever that was not prescribed to you or that you took for the experience or feeling it caused” (coded 0=”No” and 1=“Yes”).

The independent variables utilized fell under the categories of “Mental Health”, “Adult Depression”, and “Alcohol.” First, depression was measured using the survey question, “In the last thirty days have you experienced periods of depression lasting several days or longer” (0= “No” and 1=“Yes”). Second, mental distress was operationalized by the survey question, “In the last 30 days how frequently have you experienced thoughts of hopelessness.” The response options were; (1) “All of the time,” (2) “Most of the time,” (3) “Some of the time,” (4) “A little of the time,” and (5) “None of the time,” but it was recoded as (0) “Never” (“None of the Time”) (1) =“Sometimes” (“Some of the time” and “A little of the time”), and (2) “Often” (“All of the

time" and "Most of the time"). Third, social anxiety was operationalized by the survey question, "In the last thirty days how much difficulty have you had talking to strangers?" The questions response options were (1) "No difficulty," (2) "Mild difficulty," (3) "Moderate difficulty," (4) "Severe Difficulty," and (5) "Did Not Participate," but it was recoded as (0) "No Difficulty," (1) "Some Difficulty" ("Mild Difficulty" and "Moderate Difficulty"), (2) "Severe Difficulty," and (3) "Did Not Participate." Finally, alcohol consumption was measured using the survey question, "On average, how many days did you drink an alcoholic beverage each week during the past 12 months." The response options ranged from 0 to 7. Initially the survey question only dealt with individuals who reported drinking, and essentially excluded those who did not drink assigning it a value 99. For the purpose of this study, however, the value of 99 was recoded to 0, in order to account for individuals who reported not drinking at all.

The control variables in this study were age, education, income, and gender. The variables age and income were initially scale variables that were recoded into categorical variables. Initially age included those aged 12-17 years old; however, for this study these values were excluded, and only those aged 18 or older were considered. The final coding for age was as follows: (0) "18-25," (1) "26-34," (2) "35 and older." The finally coding for income was as follows: (0) "less than 20,000," (1) "20,000-49,999," (2) "50,000-74,999," (3) "75,000 or more." The variable of education was a categorical and initially containing 11 response options: (1) "5th grade or less," (2) "6th grade," (3) "7th grade," (4) "8th grade," (5) "9th grade," (6) "10th grade," (7) "11th grade," (8) "12th grade," (9) "Freshman/13th year," (10) "Sophomore/ 14th year or Junior/ 15th year,"(11) "Senior /16th year or Grad/Prof School." The response options 1-7 were recoded (0) "Less Than High school;" response option 8 was recoded as (1) "High School

Graduate;" response options 9 and 10 were recoded as (2) "Some College;" and response option 11 was recoded as (3) "College Graduate.". Gender was coded as (0) "Male" and (1) "Female.

Table #1:
Descriptive Statistics

	No	**Yes**			**Total**
	N (% valid)	**N (% Valid)**			**N/100%**
Prescription P.R. Misuse	8,094 (14.7)	46,865 (85.3)			54,959
	No	**Yes**			**Total**
	N (% Valid)	**N (%Valid)**			**N/100%**
Depressed	25,160 (67.5)	12,088 (32.5)			37,248
	Male	**Female**			**Total**
	N (% Valid)	**N (%Valid)**			**N/100%**
Female	26,331 (47.7)	28,829(52.3)			55,160
	Never	**Not Often**	**Often**		**Total**
	N(%Valid)	**N(%Valid)**	**N(%Valid)**		**N/100%**
Mental Distress	24,322(65.3)	11,139 (29.9)	1,778 (4.8)		37,239
	18-25	**26-34**	**35 & Older**		**Total**
	N (% Valid)	**N (% Valid)**	**N (% Valid)**		**N/100%**
Age	18,142(48.5)	5,446(14.6)	13,836(37.0)		37,424
	No Difficulty	**Some Difficulty**	**Severe Difficulty**	**Did Not Participate**	**Total**
	N (%Valid)	**N (% Valid)**	**N (% Valid)**	**N (% Valid)**	**N/100%**
Social Anxiety	17,932 (59.5)	9,862(32.7)	1,374(4.6)	964 (3.2)	30,123
	< H.S.	**High School**	**Some College**	**College Graduate**	**Total**
	N (% Valid)	**N (% Valid)**	**N (% Valid)**	**N (% Valid)**	**N/100%**
Education	5,705(15.2)	11,869(31.7)	11,380(30.4)	8,470(22.6)	37,424
	< 20k	**20k – 49k**	**50k -74k**	**75k or more**	**Total**
	N (% Valid)	**N (% Valid)**	**N (% Valid)**	**N (% Valid)**	**N/100%**
Income	13,048 (23.7)	17,841(32.3)	8,861(16.1)	15,410(27.9)	55,160
	Mean	**SD**	**Min**	**Max**	**N**
Alcohol, Weekly	1.07	1.71	0	7	27,506

Findings

Based upon a univariate analysis, about 85% (85.3%) of adults never misused prescription pain relievers, while about 15% (14.7%) report misusing prescription pain relievers. According to the binary multivariate logistic regression analysis, about 17% (Nagelkerke r^2= 0.17) of the variance in prescription pain reliever misuse was explained by periods of depression, mental distress, social anxiety, alcohol consumption, age, education, income, and gender differences (Model x^2= 1,285.56; $p<0.001$). First, consistent with H1, those who are depressed were about 60% more likely to misuse prescription pain relievers than those who do not report

frequent periods of depression (Exp[β]= 1.61; Wald χ^2=75.94; p<0.001). Second, consistent with H2, those who sometimes experience mental distress sometimes were about 22% more likely to misuse prescription pain relievers than people who do not experience mental distress (Exp[β]= 1.22; Wald χ^2=13.17; p<0.001), and those who often experience mental distress were about 58% more likely to misuse prescription pain relievers than those who do not experience mental distress (Exp[β]= 1.58; Wald χ^2=20.00; p<0.001).

Consistent with H3, those who have some social anxiety were about 45% more likely to misuse prescription pain relievers than those who do not experience social anxiety (Exp[β]= 1.45; Wald χ^2=44.77; p<0.001), and those who have severe social anxiety were about 67% more likely to report prescription pain reliever misuse than those who do not experience social anxiety (Exp[β]= 1.67; Wald χ^2=19.35; p<0.001). Consistent with H4, as number of days per week that one reports consuming alcohol increased, the likelihood of prescription pain reliever misuse increased by about 40% (Exp[β]= 1.40; Wald χ^2=642.30; p<0.001).

Regarding the control variables, although the findings regarding gender was consistent with previous research, the findings related to age, education, and income were surprising. Specifically, women were just over 27% less likely than men to misuse prescription pain relievers (Exp[β]=0.73; Wald χ^2=39.89; p<0.001). People between the ages of 26 and 34 were just over 19% more likely to misuse prescription pain relievers than people between the ages of 18 and 25 (Exp[β]=1.19; Wald χ^2=6.42; p<0.05); however, people who are 35 years old or older were over 50% less likely to misuse prescription pain relievers than those between the ages of 18 and 25 (Exp[β]=0.49; Wald χ^2=125.44; p<0.001). Moreover, people with a college degree had the only statistically significant difference in the misuse of prescription pain relievers than those with less than a high school degree. Interestingly, people with a college degree were just over

17% less likely to misuse prescription pain relievers than people with less than a high school degree (Exp[β]=0.83; Wald χ^2=4.75; p<0.05). Income, however, was surprisingly statistically insignificant. **Table #2:**

A Multivariate Logistic Regression Analysis of The Impact of The Independent Variables on The Likelihood of Prescription Pain Reliever Misuse.

	B(S.E.)	**Exp(B)**	**95% C.I.**
Periods of Depression	0.47***(.05)	1.61	1.44, 1.79
Mental Distress (Never)			
Sometimes	0.20*** (0.06)	1.22	1.10, 1.36
Often	0.46*** (0.10)	1.58	1.29,1.93
Social Anxiety (No Difficulty)			
Some Difficulty	0.37*** (0.06)	1.45	1.30, 1.61
Severe Difficulty	0.51*** (0.12)	1.58	1.33, 2.10
Did Not Participate	0.28 (0.15)	1.32	0.99, 1.75
Weekly Alcohol Consumption	0.33*** (0.01)	1.40	1.36, 1.43
Age (18-25)			
26-34	0.18* (0.07)	1.19	1.04, 1.36
35 and older	-0.71*** (0.06)	0.49	0.44, 0.56
Education (Less Than High School)			
HS Graduate	-0.03 (0.08)	0.97	0.83, 1.14
Some College	0.03 (0.08)	1.03	0.88, 1.21
College Graduate	-0.19* (0.09)	0.83	0.70, 0.98
Income (Less Than 20,000)			
$20,000-$49,999	-0.013(0.07)	0.99	0.87, 1.12
$50,000-$74,999	-0.03 (0.08)	0.97	0.83, 1.13
$75,000 or more	-0.12 (0.07)	0.88	0.77, 1.02
Female	-0.32*** (0.05)	0.73	0.66, 0.80
Constant	-2.20*** (0.09)		
Model χ^2	1285.56***		
Nagelkerke r^2	.166		

*p<.05; ** p<.01; *** p<.001

Discussion

This study sought to examine the impact of alcohol consumption, depression, and social anxiety, all of which have been linked to SUD, on the likelihood of misusing prescription pain relievers. The findings indicate that indeed alcohol consumption and mental health conditions correlate directly with a propensity for prescription pain reliever misuse. The findings of this study can potentially assist healthcare providers in safer prescribing practices as well as other

practical applications. With a broader knowledge of conditions that correlate with the misuse of prescription pain the medical community can engage in safer prescribing of this exceptionally potent medication.

The findings of the analysis relating to non- medical prescription pain reliever misuse, periods of depression (H1), mental distress (H2), and social anxiety (H3) support previous research that shows comorbidity between common mental health diagnosis and prescription pain reliever use (Braden, et al., 2009; Sullivan, Edlund, Zhang, Unützer, & Wells, 2006). The analysis shows a very significant increase in propensity for non-medical prescription pain reliever misuse and periods of depression as well as frequency of mental distress and social anxiety. This increased propensity could be linked to a theory known as "chemical disassociation", a chemically induced form of psychogenic disassociation (Somer, Altus, & Ginzburg, 2010). As a result of mental illness, people can find reality very difficult to endure and, thus, seek relief via chemical disassociation or self-medication (Bolton, Cox, Clara, & Sareen, 2006; Carrigan & Randall, 2003; Robinson, Sareen, Cox, & Bolton, 2009).

The relief prescription opioids provide unfortunately becomes contraindicative after a certain period of time, in that the initial mental pain that it originally served to minimize comes back in greater degree (Häuser, Bock, Engeser, Tölle, Willweber-Strumpf, & Petzke, 2014). The mental pain that the medication was intended to reduce is only eased for a period of time. After the medication wears off, the users are met with the previous pain as well as the mental anguish related to their actions, such as guilt, remorse, and shame. The cycle of this pain can, in turn, foster dependence, as the individual requires more medication each time to reduce the level of pain he or she feels.

The significant correlation in these findings can be helpful to providers in the healthcare community (i.e. counselors, primary care physicians, specialists), as well as any party who has a potential influence on the individuals who use prescription pain relievers (e.g., friends, family, loved ones). Particularly of interest to the individuals in misusers' social circles are the findings related to H4 that found that as alcohol consumption increased the propensity for the misuse of prescription pain-relievers. Alcohol consumption, being more widely accepted as a social adhesive in many situations, can serve to demonstrate the level of risk that one may have to abuse pain relievers that may have initially been prescribed for medical reasons.

Rather serendipitous findings, however, were the insignificance of income and the particular significance of age and education. First, the findings demonstrate that the prescription drug epidemic has its impact on the individual regardless of socio-economic status, and that, contrary to commonsense notions, drug abuse is not exclusive to certain income brackets. Second, those who are between the ages of 26 and 34 were of a significantly higher risk to abuse prescription pain relievers than those who were between the ages of 18 and 25. Finally, those who reported having a college degree did demonstrate a less significant propensity for non-medical prescription pain reliever use than those who reported simply a high school education.

Limitations

The dataset used in this study is statistically representative of the U.S. adult population; however, it had a few substantive and operational limitations. The variable of depression in H1 was dichotomous (1) "Yes" (0) "No," which did not allow for a clear understanding of the severity of depression one experienced. Though the variables for H2 and H3 (mental distress and social anxiety, respectively) are linked directly to the operationalized definitions in the hypothesis, they are not the sole characteristics of said conditions. This allows for some

limitations on understanding the impact of these independent variables on the likelihood of prescription pain reliever misuse. Future research could potentially expand each hypothesis into more variables associated with each condition essentially providing a single, more in-depth, study per hypothesis. The control variables also invoke the need for greater research on social factors that influence this epidemic, this study only briefly discusses these factors as they were not the primary focus of the research.

Conclusions

Prescription drug abuse has reached epidemic proportions nationwide. The findings of this study further reinforce the notion that substance abuse correlates directly with mental health as well as co-occurring substance use. Implications for health providers suggest that more mental health resources need to be made available to the general public, and especially targeted to the groups mentioned above. The connection that this study makes between mental health, co-occurring substance use, and the propensity for prescription pain reliever misuse will hopefully encourage other scholars to further examine this devastating social problem and its correlating conditions.

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Commemoration, Controversy, and Campus Buildings: A Case Study — Virginia Tech, 1997–2020

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Commemoration, Controversy, and Campus Buildings:

A Case Study—Virginia Tech, 1997–2020

ABSTRACT

Part historical reconstruction and part memoir by a participant observer, this article reveals the path that led, between 1997 and 2020, to three changes in names of campus residence halls at Virginia Tech. Major spurs to such reconsiderations of the names of campus buildings at many schools over the past decade were the shooting murders at Emanuel African Methodist Episcopal Church in Charleston in June 2015, the "Unite the Right" violence in Charlottesville in August 2017, and the public murder of a Black man by a uniformed police officer in Minneapolis in May 2020. The particulars of the Virginia Tech story were more local and began earlier—in 1997–1998 and 2004–2005—but converged with the national narrative in 2020.

Commemoration, Controversy, and Campus Buildings:

A Case Study—Virginia Tech, 1997–2020

At institutions of higher education, leaders and stakeholders tend to notice birthdays denominated in half or full centuries but pay less mind to quarter-century marks, and Virginia Tech did not do a lot to take notice of its official 125th anniversary in 1997. Yet some events associated with that anniversary, whether entirely deliberate or utterly accidental, reverberated through the closing weeks of 1997 and on down through the next two decades and more.

Those were related to a special class on the history of the school, itself unquestionably intentional, for which students were bidden each week to go in groups to Special Collections and explore one category or another of materials, including the yearbook, *The Bugle*. An entirely unanticipated discovery by one group of students in October launched a multi-decade series of protests and reports about the names of campus buildings, one in particular, Lee Hall, a capacious residence hall, built in 1966 and named in 1968 for a longtime (1896–1946) professor of electrical engineering, Claudius Lee (1872–1962). Student protests drawing upon the 1997 discovery—about one individual, his representation in the 1896 yearbook, and the fact that his name adorned a prominent campus structure—originated in 1997, recurred in 2004, and erupted once again in 2020.

Over the past decade and more, a great many institutions have faced calls to change the names of campus structures and other features. Major spurs to such reconsiderations were the shooting deaths at Emanuel African Methodist Episcopal Church in Charleston in June 2015, the "Unite the Right" violence in Charlottesville in August 2017, and the public murder of a Black man by a uniformed police officer in Minneapolis in May 2020. The particulars of the Virginia

Tech story were more local and began earlier—in 1997–1998 and 2004–2005—but converged with the national narrative in 2020.

ICONOGRAPHY AND CONTROVERSY, 1997–1998

Students in the class "History of Virginia Tech" were tasked with going to Special Collections, in teams of three or four of five, selecting from whatever category of materials was to be consulted in a particular week, finding items that struck them as illuminating, then reporting back to their classmates what they had found regarding both substance and possible significance—at the same time, looking for possible topics for fuller exploration in a short research paper.

One group, perhaps the first people in years to have opened and examined the second *Bugle* ever published, that for 1896, reported in October to the class on a page (101) they had come across featuring a campus group that called itself the "K.K.K." Its members included a graduating senior (and the yearbook editor), Claudius Lee, who identified himself as its president, or rather the "father of terror," with other officers sporting titles like the "right hand of terror" and mere members "angels of terror."

Was this Lee, they inquired, the same person after whom a very large campus residence hall on Washington Street was named? It turned out to be the very same Lee, who, after a long career as an illustrious member of the engineering faculty, was celebrated in the 1960s by having his name put on a new building.

Another student in the class, Cordel Faulk, wrote an op-ed on the subject for the *Collegiate Times*, the undergraduate daily published at Virginia Tech. Ian Zack, the higher education writer for the *Roanoke Times*, picked the story up, and on November 3 his account

appeared on the front page, top of the fold, in huge font, as "Grand old man, or the Tech KKK's 'Father of Terror'?" From there it soon went to the *Richmond Times-Dispatch*, the *New York Times*, and elsewhere.

Alerted the previous day that the *Roanoke Times* story was coming, and concerned that it might necessitate "de-naming" Lee Hall, President Paul Torgersen and his able chief of staff, Carole Nickerson, appointed an ad hoc committee of three—two members of the faculty plus the graduate student representative to the Board of Visitors—to advise him. Reporting back within the week that had been allotted, the committee provided an enhanced collection of relevant materials from the years around 1896, traced the history of early Black students at Virginia Tech, and suggested a broad range of possible actions.

WHITE TERRORISTS, BLACK TARGETS

Most students at Virginia Tech a century and more ago came from somewhere in Virginia, and a typical way of grouping themselves was to organize clubs whose members came from various local areas. Claudius Lee came from Pittsylvania County—the Danville area, Virginia's deepest South, whether in the 1880s or the 1960s. Having lived there during his childhood, he was quite possibly present as an eleven-year-old, together with his father, when a famous contrived racial incident in 1883 occurred that was designed for, and proved fabulously successfully at, bringing to an absolute end a biracial regime, a Black–White coalition called the Readjusters, that had dominated politics in the city of Danville and across the state of Virginia for the previous few years.

In the one week that the committee members had to prepare their report, among the material they came across was another page (108), this one on the Pittsylvania Club, of which Lee was also a leading member. That page declared the group's "motto"—"Hang 'em"—and, for an accompanying visual, presented an obvious lynching, a depiction in the abstract of just such an occurrence, a series of images, first just the boots, then a partial image, then the entire body. Among the titles of the club's members, the current president (each serving a single semester) was the "high arch fiend," and the vice-president "junior arch fiend." The four "past arch fiends" included Claudius Lee.

In the minds of the three ad hoc committee members, those two pages of the 1896 *Bugle*, individually and in combination, unambiguously promoted a domestic terrorist approach to life. The KKK page—the only page typically referenced in any subsequent discussion of the matter—called forth the organization that, especially in its first incarnation in the years around 1870, embodied the use of rape and assassination, quite aside from the incineration of Black churches and Black schools, as social and political weapons. The lynching page appeared to condone—in fact celebrate—the awful act, which was carried out with particular frequency precisely in the decade of the 1896 *Bugle*'s publication.

The ad hoc committee began its work without any guidance from developments on other campuses. At that early time, the many examples from the twenty-first century—including those at the University of Virginia or at Washington and Lee University—lay years in the future. Committee members had no knowledge of what even now seems the singular previous such instance, at the University of Oklahoma in the 1980s. But that early sequence, when it came to light later on, illustrated how change might be resisted and then how it might be achieved. One prominent building on campus commemorated Edwin DeBarr—perhaps the leading patriarch in

the University of Oklahoma's early decades, starting in the 1890s, but then a leading light in the 1920s of the Ku Klux Klan in Oklahoma.

An early effort to remove DeBarr's name was turned back. But a change of institutional leadership a few years later led to a contrasting outcome. Since that time, when the name reverted to "Chemistry Building," a prominent sign out front has explained why DeBarr had during one period been seen as such a compelling choice for commemoration—and then why, many years later, the case for removing his name had in turn seemed so compelling.

THE REPORTS OF 1997–1998

The committee's November 1997 report, to quote from it, "conveys the committee's reflections on the recent revelations about the 1890s, together with ways that the university might consider responding" in the 1990s.

In that light, committee members adopted an approach that pointed up a dual history on race at Virginia Tech. On the one hand were the two pages in the 1896 *Bugle* evoking Claudius Lee's abysmal orientation on matters of race. In a striking counterpoint were the twin facts that, among the eleven historically-White land-grant schools in the former Confederate South, VPI had been the first to enroll—and subsequently the first to award a degree to—a *Black undergraduate*, dating from Irving Linwood Peddrew III's enrollment in 1953 and, Peddrew having chosen not to return for his senior year, Charlie Lee Yates's graduation in 1958.

The ad hoc committee's advice was not to be publicized, the president had made clear to its members, and anyway was not to comprise an actual list of unified recommendations. Committee members therefore realized that they had no need to speak with a single voice as they

offered ideas, including what to do about the name of Lee Hall. Not only was the committee not authorized to recommend a change of name, members felt conflicted on the matter, recoiling from keeping the name and, at the same time, resisting an easy sanitizing of the past by erasing a particular contested part of it. In the end, the administration did not propose a change of name to the Board of Visitors, the institution's ultimate authority on such matters. But even as the committee did its work, the president set in motion the hiring of a new "vice president for multicultural affairs," and some months later Dr. Benjamin Dixon took up the post.

The report did not become public until a few years later, and seems still not readily available, so its content has generally remained a matter of speculation and presumption. But its guidance ranged over a variety of what it called "options." Specifying the names Irving Peddrew and Charlie Yates, for example, it spoke of "the honorary degree option." As for people who might be considered for commemoration at campus buildings, Lee or no Lee, it identified three, among them Peddrew and Yates.

Suggestions also included ways to enhance initiatives dating from some point earlier in the 1990s. The Black Cultural Center, which had opened in Squires Student Center in 1991, might see its mission and resources enhanced. Regarding a curricular enhancement, a "Black Studies option" could build upon a minor in the field, which had become available two years earlier, and offer a full major. (The minor gained a new name, "Africana Studies," in 2005, but a degree program has yet to materialize.) The report went on to point out: "Associated with the option of establishing a Black Studies program would be recruitment of more black faculty—though recruitment of more black faculty and establishment of a Black Studies [major], while clearly related, stand separately."

With reference to the proposed option of characterizing Lee Hall instead as "Diversity

Hall" (with or without retaining the name Lee), the report gave an overview of the history of the Klan. In its first incarnation, in the years around 1870, the KKK had targeted Black southerners—their *schools*, their churches, their political power. In the second, in the years around 1920, it had gone national and broadened the objects of its wrath and terror to include, said the report, "people who practiced what Klan members perceived as aberrant religious faiths (Catholics, Jews) and aberrant sexual behavior." So the committee suggested that "Diversity Hall" might house offices of such groups as Hillel, the Black Graduate Student Association, and the Lesbian, Bisexual, and Gay Association.

A follow-up report (in February 1998) adopted a rhetoric of more direct advocacy and addressed continuing institutional shortcomings regarding racial inclusion. It made specific suggestions as to how Admissions might more aggressively recruit Black students, starting with William Fleming High School in the nearby city of Roanoke.

Both reports expressly pointed the university toward a worldview antithetical to the one depicted in the newly-discovered pages of the 1896 *Bugle*. Over the years, a number of the committee's suggestions came to pass: one residence hall named in honor of both Peddrew and Yates; an honorary degree for Peddrew. But nothing was done of the sort that any member saw as necessary regarding Lee Hall. And the name remained.

REDRESS AND RECURRENCE, 2003–2005

The year 2003 brought a Black Alumni Reunion that celebrated the pioneer Black students of the 1950s. Fifty years had passed since Irving Peddrew stepped onto campus in 1953 (and 47 years since he had last been near the place). Four of the initial six—Lindsay Cherry, Charlie Yates,

Matthew Winston, and Essex Finney—had all overlapped in their time at VPI, but never since then had they all been together in the same place, let alone on the Virginia Tech campus.

Also in 2003 came the dedication of a new residence hall, just down the hill from Lee Hall. Because the building was new and had not yet been given any name, nothing had to be taken down in order for the new names to go up. Speaking at the ceremony were the two men whose names the structure would thereafter carry: Irving Peddrew, the first African American to come to campus as a degree-seeking student, and Dr. Charlie Yates, the first to stay for all four years and complete his degree. The juxtaposition was striking, as the man from the 1890s and the two men from the 1950s each claimed a significant—and adjacent—place on campus, thereby high-lighting the very duality in Tech's history that the 1997 report to President Torgersen had identified. One committee member from 1997, in particular, took delight in imagining the three men, each with arms crossed, staring from one building to the other, one man now required to share campus space with the other two.

But the name Lee Hall remained. The events of fall 1997 never went away; the images in the 1896 *Bugle* continued to intrude upon the campus political culture. The matter drew the concern and attention of three consecutive Virginia Tech presidents.

Meanwhile, it was widely—and erroneously—understood that the ad hoc committee had concluded the 1896 "K.K.K." to be a student hoax. Such reassurance had been earnestly sought in the aftermath of the 1997 revelations, but in its report the president's committee had italicized its express response to such yearnings: *"Such reassurance the committee is unable to supply."*

After the initial scrutiny in the fall of 1997, the next chief episode occurred in the fall of 2004 (the year after the dedication of Peddrew-Yates Residence Hall), when a new cohort of students, spurred to action by a new collection of racist incidents on campus, protested the name

Lee Hall, with a new university president in office. Assigned the task of exploring the issue this second time was a standing group, the Commission on Equal Opportunity and Diversity, chaired during 2004–2005 by Raymond V. Plaza. His group held a number of hearings and then in early 2005 produced an extensive list of recommendations, some to be addressed right away, others less soon, and still others later on.

The bigger recommendations had to do with offering Irving Peddrew an honorary degree (as "recommended," it was said, in the 1997 report) and adopting "a new name" for an unnamed residence hall adjacent to Peddrew-Yates ("to complement Peddrew-Yates and counter the impact of the Lee Hall name"). Thus the 2005 report did not urge a change of name for Lee Hall; the name remained. Lesser, short-term recommendations were variously implemented (at least temporarily) or not. Their larger, longer-term counterparts never were, at least before another new president of the university, Dr. Timothy D. Sands, had moved in 2014 into The Grove, the on-campus president's home.

TOWARD RESOLUTION, 2020

By mid-2020, so fifteen years after the 2005 report, many things had changed. Early in his presidency, President Sands put out a new welcome mat. Implementing one of the key suggestions from 1997 and one of the larger recommendations from 2005, Dr. Sands saw to it that, at the 2016 university commencement (sixty years after leaving the school), Irving Peddrew found himself holding an honorary degree.

Lee Hall remained, though President Sands was predisposed to ridding the campus of what were ever more widely perceived as *un*welcome mats. The murder of a Black man on the

streets of Minneapolis by a uniformed law officer in broad daylight transformed the political and cultural landscape; George Floyd's death made change suddenly far more likely in a great many places across America. Moreover, communications technology had developed to where rising senior Jimmy Kaindu could post a petition to de-name Lee Hall and, within a matter of days, see it attract many thousands of signatures. Supporters included students who had served as resident advisors in Lee Hall and knew how much unhappiness and pain the name had often caused.

As in 2004, the president in 2020 had a standing group to which he could direct the task of exploring the matter and making recommendations. In fall 2017, in the aftermath of the events that summer in Charlottesville, President Sands had appointed a Council on Virginia Tech History. On the one hand, the Council had discretion to consider a wide range of dimensions of race on campus. On the other, it had responsibility for revisiting the full history of the institution in the long run-up to Tech's official 150th anniversary in 2022.

Two dimensions of the Claudius Lee saga became central for the Council in making its recommendations. For one, members recognized, this is a residence hall, and hundreds of young lives every year engage inside that particular structure in the process of becoming who they will be; it is their home. And two, among all the White supremacists of his era, Lee stood out precisely because of those two ineradicable pages; they could scarcely become undiscovered.

The Council on Virginia Tech History expeditiously canvassed the situation and reached a commitment that indeed the time had come for the name Claudius Lee to come down off the Washington Street residence hall. More than that, having developed a short list of strong candidates for a name (or multiple names) that might replace Professor Lee's, the Council selected Janie and William Hoge to recommend to the university's Commemorative Tributes Committee—which subsequently accepted the nomination for recommendation to the Board of

Visitors.

JANIE ELIZABETH PATTERSON HOGE (1887–1960) AND WILLIAM HARRIS HOGE SR. (1883–1964)

The Hoges (pronounced with a long O and a hard G) were an elderly Black couple who had provided room and board for all eight pioneer African Americans who were enrolled at Virginia Tech between 1953 and 1960. The Hoges' home had been located on Clay Street, next to the First Baptist Church between Penn and Wharton Streets, a one-mile walk from the engineering buildings where the eight had most of their classes. Whatever the weather during fall, winter, or spring, the eight students, barred from living or dining on campus, had to walk all the way home and back for a hot lunch any day that featured both morning and afternoon classes and labs or drills.

Lindsay Cherry, one of the eight, had been searching for some way—or ways—to honor the Hoges. He had in mind a named scholarship, as well as a commemorative marker somewhere that might describe them, he proposed, as "offering love, compassion, and guidance to those young trailblazers who were in search of a better life, for themselves and for others."

In the end, Mr. and Mrs. Hoge seemed a simply compelling choice for the structure to be henceforth only formerly known as Lee Hall. The Hoges were crucial to the survival and success of the pioneer African American students at Virginia Polytechnic Institute. From 1953 through 1960, the couple hosted a small number of young men who—in an updated, 1950s version of "separate but equal"—had been admitted as engineering undergraduates but who, on racial grounds, were denied rooms on campus.

The building long named for Claudius Lee was a residence hall, precisely the kind of structure that the pioneer Black students were not permitted to live in, the very reason they boarded with the Hoges. In the 2020s, it houses two Living Learning Communities, both of them in engineering, the area of study that the students staying with the Hoges were required to follow if they wished to enroll—and remain enrolled—at Virginia Tech.

Moreover, the Hoge name represents the broad array of other people who, in so many roles, throughout the years, have, invisibly and unsung, supported the campus's more obvious and recognized functions—that is, fostered the work of the institution's official constituents, the faculty and students. Doing so, the name acknowledges the range of close connections between campus and community.

Most of all, it brings into focus a core way in which the institution, long exclusive, has become more inclusive. Across four centuries, racial privilege or proscription has been at the center of social, economic, legal, and political life in America in general and in Virginia in particular. William and Janie Hoge came across center stage in the historical drama of Virginia Tech at the very moment that they could facilitate an end to the most intractable barrier to inclusion of all.

When growing up in the 1890s (at about the same time that Claudius Lee was a student at Virginia Polytechnic Institute), neither of the Hoges had a lot of schooling, Mr. Hoge having gone through the third grade, Mrs. Hoge through grade seven. Well into their adulthood, the U.S. census indicated that Mr. Hoge was able to write a little but not read. In the twilight of their lives, he and his wife played key roles in opening up an institution of higher education to a much younger generation of Black Virginians.

PRO-SLAVERY AND ANTI-BLACK:
FROM BARRINGER HALL TO WHITEHURST HALL

Other names than Claudius Lee's had also surfaced for interrogation, though none with so much scrutiny. Having dispatched the matter of Lee, the Council focused on one other name, Paul Brandon Barringer, M.D., who had served as president of VPI between 1907 and 1913. (The 1997 and 1998 reports had both alluded to Barringer but not named him, nor had his record been explored then in any detail.)

As in the case of Lee, a new residence hall built in the 1960s bore Barringer's name. Once closely examined, Dr. Barringer's lectures and publications on Black southerners, especially in the years around 1900, revealed themselves virulently anti-Black and relentlessly proslavery—and not remotely susceptible to being written off as somehow ambiguous in their intent or the product of a twenty-something whose views might have grown less reactionary in his more mature years.

Dr. Barringer first gained widespread fame as a result of a speech he delivered in 1900 at a medical convention in Charleston, South Carolina, the original home of secession in 1860. Asked to speak on "the influence of heredity upon the negro" (he had urged some such topic), Barringer gave a talk that appeared in print under the title *The American Negro: His Past and Future*.

Adding the weight of scientific authority to beliefs already widely shared, Barringer enlightened his audience, there and elsewhere, with the truth as he chose to see it and say it. His characterizations of Africans and African Americans were nothing if not White supremacist, pro-slavery, anti-Black: "The ages of degradation under which he ["the negro"] was formed and the

fifty centuries of historically recorded savagery with which he came to us [i.e., White southerners] cannot be permanently influenced by one or two centuries of enforced correction if the correcting force [enslavement] be withdrawn" (5).

Barringer's ideological orientation regarding race is revealed as well in the following quotations: "If you scratch a negro you will find a savage" (13). "But we all know that we had a good negro in this country once, and that was in slave times" (20). "Thirty-five years have passed since the negro changed from the condition of a slave to that of a freedman. In every part of the South, it is the opinion of every man of unbiased mind, that the second generation is infinitely worse than the first. . . . The question for us to-day, then, and the question of questions for the South, is, 'What is the cause of the change and what can be done to remedy the evil?'" (15). In a passage that begins with "And now to the remedy," he wrote: "The people of the South [White people, of course] must act. First they must remove the negro from politics" (19). Indeed, one after another, former Confederate states were, at that very time, seeking the outcome Barringer was proposing, with Virginia about to join them.

Barringer concluded *The American Negro* with the following plea regarding the nature, purpose, and administration of schooling appropriate for all Black residents of the South: "The temporary elevation produced by the discipline of slavery is not being maintained by the efforts we have made at common school education, in the hands of his own race, [so] we must at once, if we would save the negro and the South, try something else. I would finally urge that we try henceforth an education of trade or industrial type, given at the hands of well-chosen white teachers, who will teach them to respect, to obey and to work" (23). In that last phrase, Barringer repeated exactly the language he had used in identifying "the three essentials" in "the training of all slaves": "to respect, to obey and to work" (11).

As in the case of Claudius Lee, Paul Brandon Barringer's deliberate public presentation stood out from among his contemporaries at VPI. Having determined Barringer's name to be inappropriate and unacceptable for adorning any aspect of any educational enterprise in the twenty-first century, the Council on Virginia Tech History swiftly adopted a recommendation that his name, too, come off the residence hall that had borne it for a half-century—in fact ever since the year VPI first actually recruited Black students, in 1966. (And by then, Black students were living and eating on campus and could major in any discipline the institution offered, which by then included the humanities.) In Barringer's place, the Council offered all of the remaining names that had been finalists for what had long been Lee Hall.

The Commemorative Tributes Committee selected James Leslie Whitehurst Jr. (1940–2013), class of 1963, for recommendation to the Board of Visitors. Whitehurst had enrolled in 1959, just after the last among the first six Black pioneers had finished their time at Tech (two had graduated that year). Whitehurst and the one other Black student entering that year, Robert Garfield Wells, roomed with the Hoges their first year in Blacksburg—also the last year the couple were able to offer their home for lodging.

After one more year of living off campus, Whitehurst—bolstered by legal help—argued his way into a barracks room for his junior year, and never again were Black cadets required to live off campus. Whitehurst similarly challenged, again with success, the previous restriction that had kept Black juniors from attending their Ring Dance, a big event in an undergraduate's life at Tech. Building on the achievements of the six earlier Black students, Whitehurst forced the process of desegregation along, to the benefit of all subsequent African Americans who might attend Virginia Tech. During the dozen years after his graduation, Whitehurst served as a captain in the Air Force, completed law school at the University of Virginia, and was appointed in 1970

by Governor A. Linwood Holton to a four-year term as the first African American on the Virginia Tech Board of Visitors.

Being in a position to make policy for an institution that, two decades earlier, had never enrolled a Black student—and that only that year, 1970, had hired its first Black faculty—represented a remarkable transformation in the realm of race. Whitehurst himself, with great persistence and at considerable emotional cost, had pushed the institution forward in multiple ways. Barringer faithfully reflected key features of the past. Whitehurst, not Barringer, represented the institution's best aspirations for the future.

AUGUST 2000

On August 13, 2020, the executive committee of the Board of Visitors accepted the four recommendations from the Commemorative Tributes Committee regarding names and buildings. That very afternoon, workers stripped off the old names of Lee Hall and Barringer Hall and installed the new names, Hoge Hall and Whitehurst Hall. Days later, a new cohort of Virginia Tech undergraduates arrived in Blacksburg, and hundreds of them moved into the old halls with the new names.

No one could have foreseen the longer-term consequences of the special fall 1997 class on the university's history. The discovery of the names Hoge and Whitehurst, or even Peddrew and Yates, had taken something of an archaeological excavation through layers of lost history. The events of October and November 1997 finally led to a change in the name of Lee Hall, and suddenly Barringer Hall too was no more. Just as striking as the elimination of the old names was their replacement with the new ones.

Virginia Tech undergraduates in 1997 had started the process regarding the renaming of Lee Hall. Subsequent students, seven years later, raised the matter again. The student petition of 2020 made action more likely. As the university's official 150th anniversary approached, the events from the 125th reverberated on. Unheralded students and community people from generations earlier gained significant symbolic recognition. Successive cohorts of Tech students had fostered changes on their campus for future students, even as they folded back the pages of the past.

A phone call to Lindsay Cherry the afternoon of August 13, 2020, alerted him to one building's change of name from Lee to Hoge. Cherry was beyond incredulous. Next, a phone call to Irving Peddrew did not get through, but a text message soon reached him. His reply: "WOW!!!"

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A Comparative Assessment of Collaborative vs. Non-Collaborative Learning

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Abstract

The purpose of this research study was to test a key principle of the Scholarship of Teaching and Learning (SoTL) theory, which suggests context as an important aspect to facilitate learning. Using group collaboration as a context within a classroom, as a pilot study of a longitudinal causal-comparative research, this undertaking investigates the cause and effect relationship of group learning at a historically Black College and University (HBCU). The study specifically focuses comparison of the impacts of collaborative versus individual learning on students' academic achievement using the research question, "Does collaborative learning impact students' academic performance?" The methodology involves assignment of two similar student groups as control and experimental (treatment) using two sections of a liberal arts course during a full academic year's fall and spring semesters. The analysis represents participation and observations involving 130 students. Contrary to the conventional research studies' findings, this research study's findings indicate the control group students' slightly better academic achievement than the experimental group. The findings and inferences provide numerous fascinating observations, inferences, and opportunities for further research.

Key words: Scholarship of Teaching and Learning (SoTL), teaching and learning methods, group learning

A Comparative Assessment of Collaborative vs. Individual Learning

Introduction

Learning, a process to gain new knowledge, skill, behavior, attitude, or preferences, involves a multi-faceted endeavor of skills that include visual, auditory, reading, writing, and kinesthetic practice, or the VARK model of learning. The Scholarship of Teaching and Learning (SoTL) theory, among its five key principles, suggests context as a critical aspect of learning. When considered from human dimension within a classroom of how well students will be able to achieve the intended learning outcomes, context obligates consideration of supportive learning environment and settings. As a potential technique, collaborative learning offers a positive context since it involves individuals to engage intellectually, emotionally and aesthetically in solving problems to create meaning. Collaboration also obligates critical thinking as an implicit skill among students working together to search for understanding, and creating meaning and positive outcomes of their learning. Since collaborative learning focuses positive interdependence, face-to-face interaction, collaborative skills and role-playing, it serves as a viable learning method, the basis of this pilot research study.

Literature Review

Among key areas of contemporary research, the focus on the effects of collaborative learning in the context of situation, interactions, processes and effects (Amigues 1987, Pea 1993, Roschelle 1992) continue to draw attention. Psychologists and contemporary pedagogy theorists (Bruner 1961, Dewey 1915, Piaget 1950, Vygotsky 1978) have articulated that as a contextualized action, learning is an active process of constructing knowledge than acquiring it.

Further advancing the theory, contemporary researchers (Apple, Morgan & Hintze 2013, Bruffee 2009) contend that the opportunity to engage with others; or collaborative learning, allows students to better engage in skills of writing, critical thinking and revision, which helps foster self-growth. Collaborative learning refers to the "mutual engagement of participants in a coordinated effort to solve a problem together" (Lai 2011, as cited in Dillenbourg et al., 1996, p. 2). Roschelle and Teasley (1995) define collaboration as "a coordinated, synchronous activity that is the result of a continued attempt to construct and maintain a shared conception of a problem" (p. 70). Collaborative learning is different from cooperative learning since collaboration involves participants working together on the same task than parallel or separate portions of the task, as is the case with cooperative learning.

Collaborative learning proponents advocate that active exchange of ideas within small groups increases interest among the participants and promotes critical thinking (Lai 2011). Collaborative pedagogy theorists Bruffee (2009) and Trimbur (2009) go as far to assert that the traditional concept of individual learning may be counterproductive to learners' critical thinking and writing, the two essential components to academic achievement. However, others caution about its complex learner dynamics, group composition, and task characteristics, all of which play a critical role. Collaboration is the quality of interaction, especially the degree of interactivity and negotiability, which can be challenging (Dillenbourg 1999), particularly its integration inside and outside of the classroom (Love et al., 2014). Additionally, since collaboration by its very nature conceals individual contributions, assessment becomes difficult for superior- and low-achievers alike. Stewart et al. (2014) provide a holistic analysis of multiple action studies regarding collaborative learning's impact on learner development that includes a critical new look at the widely held assumption that people learn best in groups.

Identifying more closely with the "effect" paradigm, this research study examines the outcome of collaboration than the collaborative process itself with respect to task performance comparing a control and an experimental group. In particular, it measures the impact of students' academic achievement comparing the group performance outcome with individual performance in a traditional face-to-face classroom setting. A pilot study of a longitudinal causal-comparative research, it investigates the cause and effect relationship using group and individual learning activities among students. The approach involves learning outcomes for two sets of undergraduate students in two statistically matched sections of the same course each semester, one as the experimental group, the other as a control group. The experimental group's learning method includes group activities that involve working in groups of five students per group to solve an identical problem. The control group's learning method involves the traditional individual activities and no group activities.

Research Design and Methodology

Research Question and Hypothetical Assumptions

Testing the Scholarship of Teaching and Learning (SoTL) theory, which suggests group collaboration as a positive practice of learning; this empirical research study explores the question: "Does collaborative learning result in students' higher academic performance?"

Hø: Collaborative learning does not result in higher academic achievement among students (Achievement = 0).

Ha: Collaborative learning results in higher academic achievement among students (Achievement ≠ 0).

Population and Sample

- Target Population: undergraduate students in two sections of a liberal arts course at a HBCU.
- Two classes of 31 students in fall 2014 and 34 students in each of the spring 2015 courses.
- Total Sample Population = 130 students during the Academic Year 2014-15.
- Experiment Group: up to 65 students receiving instruction through group activities.
- Control (Comparative) Group: 65 Students receiving identical instruction, but as individual activities exclusively.

Sample Treatment and Approach

1. Experimental Group:
    - Participant students' permission was secured through advance informed consent.
    - Anonymous test scores were identified by percentage of scores.
    - Students in each semester's class were divided into groups of five individuals per group.
    - The fall 2014 group was administered four group activities.
    - The spring 2015 semester's experimental group was administered two group activities.

- The experimental group for both semesters were administered six methods of instruction:

  (1) Required review of brief videos prior to coming to class

  (2) During the class, brief lectures with PowerPoint presentations as visual aids

  (3) Class discussions and participation

  (4) Group activities

  (5) Homework assignments

  (6) Traditional tests and exams

In-Class Group Activity Method:

(1) Group formation using the random assignment technique: students were asked to call numbers 1 through 7 and were assigned based on their number.

(2) Advance posting of each group activity on the syllabus.

(3) One week advance notice to students before each assignment.

(4) Distribution of group tasks on the scheduled day during the class session.

(5) Upon completion of the assignment, peer assessment of group activity using the strengths, improvement and insight (SII) method. Students were provided the form (created by Pacific Crest) to log their assessments (Exhibit A).

(6) Peer review and evaluation of the completed assignment for grades.

2. Control (Comparative) Group:

 This group was given identical course instruction as the experimental group but without any collaborative interaction or activities.

Instrumentation and Operationalization

Independent Variable = Mode of learning (collaborative vs. traditional individual learning) Measurement: Four group activities during the fall 2014 semester and two group activities during the spring 2015 semester

Dependent Variable = Academic achievement (grades, measured as follows):

A [b_1] = achievement grade of 90% and above

B [b_2] = achievement grade of 80-89%

C [b_3] = achievement grade of 70-79%

D [b_4] = achievement grade of 60-69%

F [b_5] = achievement grade below 60%

Control Variables = duration, semester, and class size.

Variables not controlled (because homogeneity of the population lends itself to control for the influence of the five variables stated above): duration (class start and stop dates), semester start/stop dates, age, race, gender, and family history of college precedence.

Data Collection

Achievement grades were recorded for each of the seven groups without student identity. For Fall 2014, four group activities data was collected. For spring 2015, only two group activities were administered due to a shorter semester because of cancellation of classes due to inclement weather.

Analysis

Two methods were used to analyze determine the comparison of the academic achievement between the experimental and control groups:

1. Descriptive statistics: simple tables, graphs and charts, and
2. The t-test to test the significance of difference between the two groups' means, as follows:

$$t = \frac{\bar{X}_1 - \bar{X}_2}{\sqrt{\frac{(n_1 - 1)s^2_1 + (n_2 - 1)s^2_2}{n_1 + n_2 - 2}\left[\frac{n_1 + n_2}{n_1 n_2}\right]}}$$

Where:

$\bar{X}_1$ is the mean for Group 1 (Experiment Group)
$\bar{X}_2$ is the mean for Group 2 (Control Group)

Data Analysis

(1) Descriptive Statistics

Table 1: Student Distribution by Semester

RANK	FALL 2014		SPR 2015	
	Section 1	Section 2	Section 1	Section 2
Freshmen	31	27	21	20
Sophomore	0	3	7	6
Junior	0	0	3	4
Senior	0	1	3	4
TOTAL	**31**	**31**	**34**	**34**

Table 2: Student Distribution by Gender

Student Gender	FALL 2014		SPRING 2015	
	Sec 1	Sec 2	Sec 1	Sec 2
Male	13	11	10	13
Female	18	20	24	21

Figure 1: Student Distribution by Semester and Gender

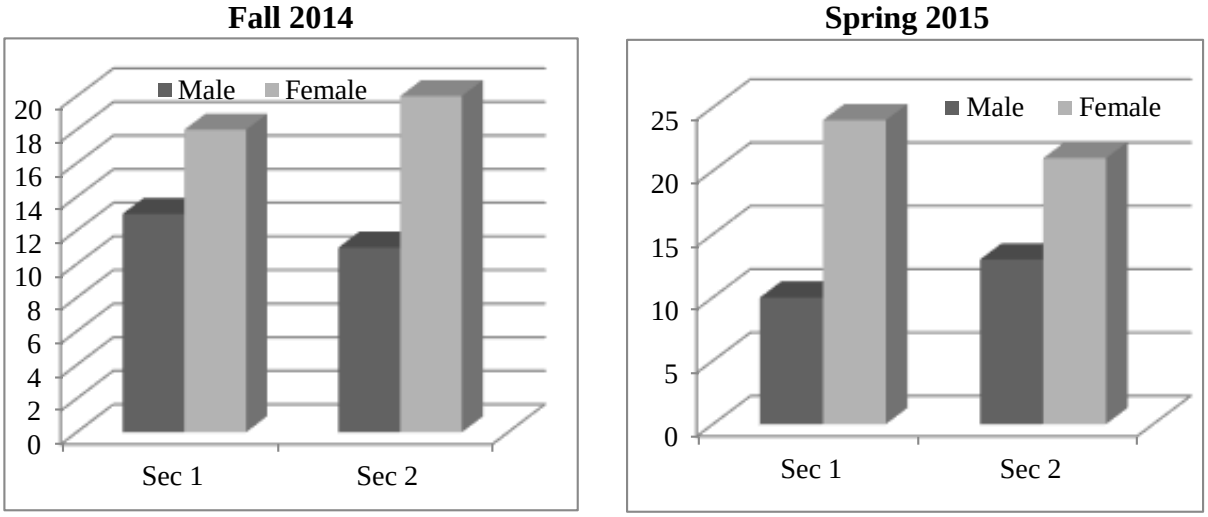
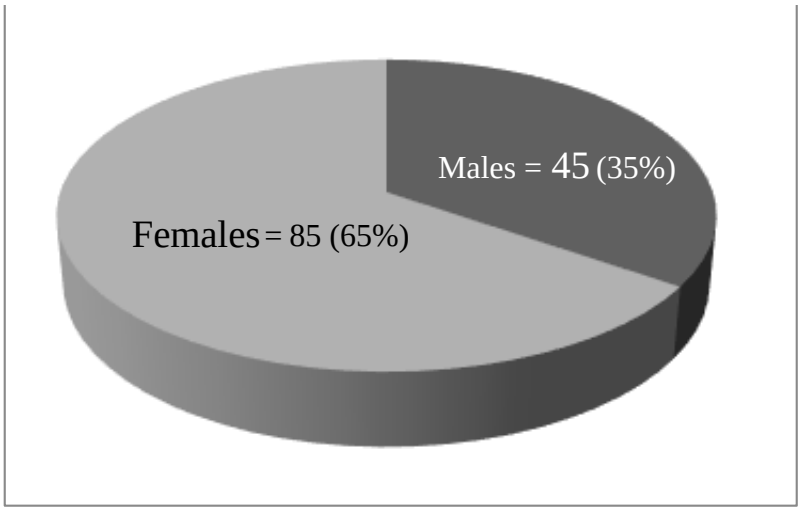


Figure 2: Overall Academic-Year 2014-15 by Gender



N = 130

(2) The t-test Analysis:

$$t = \frac{\bar{X}_1 - \bar{X}_2}{\sqrt{\frac{(n_1 - 1)s^2_1 + (n_2 - 1)s^2_2}{n_1 + n_2 - 2}\left[\frac{n_1 + n_2}{n_1 n_2}\right]}}$$

Therefore,

Fall 2014:

$$t = \frac{65 - 67}{\sqrt{\frac{296.87}{34} + \frac{224.10}{34}}}$$

Spring 2015:

$$69 - 74 \; t = \frac{\frac{235.32}{31} + \frac{140.66}{31}}{\sqrt{\quad}}$$

t = - 0.16 (Fall 2014)

t = - 0.39 (Spring 2014)

Table 3: T-test Statistics

	Fall 2014		Spring 2015	
	Experimental Group	Control Group	Experimental Group	Control Group

N	31	31	34	34
Mean	65	67	69	74
Std Dev.	15.34	11.86	17.23	14.97
DF	62 – 2 = 60		68 – 2 = 66	
t-value	-0.16		-0.39	

Table 4: T-Test Statistics Inferences for a Two-Tailed Test

FALL 2014	SPRING 2015
Degrees of freedom equals the total group size (62) minus 2, or 60	Degrees of freedom equals the total group size (68) minus 2, or 66
Entering a t table with 60 degrees of freedom for alpha = .05, the tabled value is 2.0	Entering a t table with 66 degrees of freedom for alpha = .05, the tabled value is 1.996
For alpha = .01, the tabled value is 2.66	For alpha = .01, the tabled value is 2.624
Since calculated value is smaller than the T Distribution Critical Values Table at alpha = .01, the null hypothesis is accepted that it is unlikely that collaborative learning among students results in higher academic achievement	Since calculated value is smaller than the T Distribution Critical Values Table at alpha = .01, the null hypothesis is accepted that it is unlikely that collaborative learning among students results in higher academic achievement
The alternative hypothesis is rejected.	The alternative hypothesis is rejected.

Findings

For the experimental group, collaboration shows no positive impact on students' academic performance for both semesters. In fact, for each group of students, the experimental achievement was found to be lower than the group that was given traditional instruction.

Discussion

Collaborative learning focuses the development of students' analytical skills and critical thinking with social and cooperative skills to enhance their ability to work well together.

Collaborative learning goals are fundamentally different from a traditional classroom, where the focus is on maximum coverage of the course content. For students involved in this research study, the implementation and outcome of collaborative learning surfaced numerous peculiarities and challenges. The following provides a summary of key constraints observed during this phase of the study:

- Evaluation: student expectation of additional reward for participation in a group activity.
- Personality conflicts
- The “hitchhikers”
- Peer-reviews and assessments; i.e., propensity to assign a perfect score.

Among other potential areas of impact include having a majority of students (around 70% overall) being the first-time college goers. As freshmen, in general, most students are still in the stages of developing an understanding of their expectations versus personal responsibilities. The prevailing budget crisis adds to the challenge because having a complete body of students until the third week of the semester shortens and compromises the focus on group activities in favor of the coverage of content. As future potential areas of research, the predominance of female students and a majority of students being the first-time college-goers offer feasible areas of further study.

Conclusion

The purpose of this study was to determine whether collaboration helps students achieve higher academic performance. Two identical courses with similar demographics were employed as the experimental and control group. In a direct comparison study, four classes were used over two consecutive semesters of the academic year. Two classes were taught in a traditional manner

while the other two were taught using collaborative activity. The findings demonstrated no positive impact of the collaborative learning. In fact, lower achievement than the class with traditional instruction generates numerous inquiries including necessary modifications to existing approaches. However, as the initial phase of a longitudinal study, this segment rendered numerous useful observations and findings.

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A Conversation About School Choice

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Abstract

Over the past three years, the co-authors engaged in reflective conversations (via e- mails) about the controversial issue of school choice and a free market model in public education in the U. S. Different views on the topic are examined and nine points of agreement are identified and discussed. Areas of agreement include recognizing the following: public education generates positive externalities; both public and private schools are heterogeneous; teachers in the public system as underpaid; weak teachers in public and private schools tend to get paid the same as strong teachers; people believe that K-12 education is valuable and they are willing to pay for it but not willing or able to pay an unlimited amount for it; there is a shortage of licensed teachers; a teacher shortage could be reduced if fewer teachers left teaching within the first three years of their being employed as teachers; we want all children to learn and make progress at each grade level; and the less government oversight and fewer regulations the better for all schools.

Keywords: school choice, free-markets and public education, government oversight, school improvement

A Conversation about School Choice

"The aim of argument, or of discussion, should not be victory, but progress." (Joseph Joubert)

Introduction

Last year, Frederick Hess and Pedro Noguera (2021b) published a book about finding common ground about the toughest questions in K-12 education. Their book is a series of e-mails written to one another about debatable issues relating to schools and education. More recently, Noguera shared some lessons that they learned from their experience and observed: "Education is precisely the place where we need a model of respectful debate—of listening to each other, respectfully disagreeing, and trying to find common ground when possible, without compromising the principles we hold dear or talking past each other." (Hess & Nogurea, 2021a, p. 1)

The purpose of this paper is much the same as Hess and Noguera's purpose for their book: to document and reflect upon conversations about controversial topics with someone with whom one disagrees. My friend, colleague, and co-author and I attempted to do the same but in a more limited way as we shared insights from conversations (via e-mails) about a variety of issues relevant to a free-market model and public education. Coincidentally, Hess and Noguera and my co-author and I must have been engaged in our respective correspondences at about the same time.

For clarity, I cite my colleague as a co-author. I express my views in first-person, his views in third-person (or by first name, David), and opinions, observations, or perspectives on which we agree in first-person plural.

Origins of the Conversation

David and I both teach at a small public liberal arts college in southwestern Virginia. I am a professor of education and David is a professor of economics. Both of us realize the emotional nature of the debate about school choice, but we agreed to attempt to find common ground and explore what and how aspects of public education and public policy might change in order for all children to learn and succeed in school (by whatever form of evidence that may take). We have tried to narrow the distance between two (apparently) competing views about school choice by trying to learn from each other and show how the consideration of conflicting views might evolve.

Our conversation about school choice began more than three years ago and evolved into a series of e-mails where we both questioned, commented, responded, and questioned again (sometimes at length) a variety of issues surrounding school choice and public education. Admittedly, I was defensive at first about anyone questioning the tradition of public schools as we have come to know them, and David frustrated with me because I did not recognize public schooling as a "government" monopoly and did not recognize the potential merits of school choice within a free market enterprise. Regrettably, at times, we often ended up sounding like we were having a debate, and sometimes we felt that the other was not really listening to what was being shared.

We discovered quickly that both of us want all students to learn and succeed in school. What and how that might be accomplished is the challenge that creates the competing solutions that have been debated so passionately. We also identified common obstacles from both viewpoints that need to be overlooked (or overcome), so that a practical and realistic way forward can have any chance of becoming possible. What follows is a summary of our

reflections about applying a free-market model to public schools and how our views became more informed because we both were willing to search for common ground.

The Free-market Model and Public Schools

Central to our differences and the question around which our conversations focused is this: Can the free-market economic model be applied to public schooling as a way to improve public schools? I see improvements in schools not as a consequence of choice and competition among schools, but as a consequence of the more effective interactions between teachers and students within a classroom. I do not see the power of markets driving motivation and results in public schools mainly because schools function primarily on the basis of human interactions, not profits and losses. (Ravitch, 2020)

I would be willing to accept the free-market premises offered by Read (1964), Friedman (1995), Billet (1974), and others if there were consistent evidence that choice among schools improved what transpired within classrooms in other schools. And even if the evidence is there, as Sowell (2020) suggests, and Ravitch (2020) questions, we are still faced with finding ways to move schools from where they are now to where we want them to be whatever the goals are.

The Role of Competition

When I shared my thoughts on the role of competition among schools, David offered clarification on the use of the word, "competition." I wondered how competition for students (through school choice) would cause a school (and/or teacher) to improve. I am not sure that competition among classrooms/schools is more motivating than the desire to see one's students learn and make progress, regardless of curricula requirements.

David responded:

When I use the word 'competition,' I'm not thinking about competition in an

> athletic context, person against person. "Competition" in economics is that buyers have options, and those options come in the form of alternative sellers and alternative goods and services. In the context of K-12 education, competition could mean that schools are not guaranteed funding. Public schools do not have to satisfy their patrons to stay in business, because their funding is administered by government operatives, instead of being won in voluntary exchange. Put another way, public schools do not have to pass 'the market test.'

For-profit private companies have been criticized for starting new charter schools and being asked to take over "failing" public schools, so I posed the question: "Why should there be a profit made by private companies from public monies? David responded:

> Profit is nothing more nor less than a particular form of income that is earned by people who are willing and able to take on the risk of producing an economic good BEFORE they know whether people will buy it. I want successful providers of K-12 education to earn a profit. Earning a profit is evidence of quality and consumer satisfaction. Businesses that do not earn profits do not stay in business, because they fail to provide economic goods that people want and are willing to pay for. Profit is not a 4-letter word. All attempts to remove profit from production of any economic good results in poor quality and reduced supply.

I replied that I was not sure that this applies so cleanly to public schools and asked: "Is privatizing public schools the same as establishing a free market for public schools?" David explained:

> A free market does not require 'establishing.' O.K. 'allowing.' A free market requires only that government operatives not be allowed to operate. Of course,

> government operatives seem to be a self-authorizing set of people, so getting them to "not operate" is a real challenge. I offer the idea that privatizing public schools means that we have NO public schools that are "administered." To rid ourselves of the maladies that plague K-12 education today, we simply have to have 100% private, for profit schools. Parents must be free to patronize the school of their choice, using whatever income they have at their disposal.

I thought that this might be problematic when households have different levels of income. Those that have the most, get the "best" schools? Do we not have that now with private schools? Public schools are supposed to level the playing field by offering quality education to those who cannot "afford" it, as well as to those who can afford to pay.

While one might infer that David is against public schooling, he is not. In his own words he has said:

> I don't have a problem with "public [schools]". I just want whatever is public [to be] paid for voluntarily, instead of forced taxation. In the early days of the republic, we used subscriptions to fund public works. People were and still would be willing to subscribe for worthy projects. For me, it is never correct to coerce and force people. How can it ever be right to force other people? It's always correct to persuade people. School choice for me is about getting rid of the coercion and forced taxation to pay for public schools.

David anticipated my question: "What about people who can't afford K-12 education?" he asked. His suggestion that K-12 education [when viewed as a commodity] is just like any other economic good. He suggested that producing it requires the use of scarce resources (land, labor, and capital). People must pay, if we are to have K-12 education. His proposal is that households receive an education benefit, much as they receive a food benefit today. This

approach is far from perfect, but it is better than outright public funding of K-12 education, he concluded.

Vouchers

The most common option that pro-choice advocates suggest is vouchers, which is simply public funds in the form of vouchers or tax-credits to be used to pay for tuition to private and/or religious schools. Milton Friedman (1995) argued that government's role should essentially be limited to paying for education (through vouchers mainly), not operating schools; a view about which we agree.

Vouchers remain a controversial policy issue and a suggested solution to school choice. I find it interesting that those in favor of school choice and vouchers want money to fund their private schools with little municipal oversight, which amounts to less regulation (or bureaucratic interference), which advocates of public schools want as well. However, I am willing to accept the idea of vouchers if the amount is sufficient enough for poorer families to have the same choice of sending their children to private schools as are more affluent families. Otherwise, the poorer families cannot afford to pay the difference in the cost of tuition and the amount of the vouchers and then will have little choice but to send their children to public schools who will have lost funds in the form of vouchers paid to the private schools. More fortunate families have more choices now when education is the issue; providing additional but partial funds to poorer families does not seem helpful at all.

School Choice, Reform, and Improvement

We both agree with Henig (1994) that the role of government should be funding, not provision, and not regulation. Unfortunately, we have had for decades now an increase in government intervention and regulation in the name of accountability, and David and I found

that we both agree that government regulations have hampered progress towards meaningful reform and improvements. Furthermore, Henig suggests that if both sides of the debate could work towards government funding without regulation, then maybe a realistic compromise could be reached and educators would not feel threatened and undermined by those with little knowledge about children, learning, and teaching.

At its most basic and uncontroversial level, school choice is a reform movement focused on affording parents the right to choose which school their child attends. That said, the concept and the issues surrounding choice are anything but uncontroversial. While some of my comments and observations to this point may indicate that I am opposed to free markets for K-12 education, I am not. However, I am not persuaded that free-markets in K-12 education as touted by free market advocates (Read, Friedman, my colleague David, and others) will produce the improvement in schools that they predict. Essentially, they believe that allowing schools to fail as a result of competition and choice will help the system overall; a view that I do hold.

I propose that the real and meaningful point of choice is with teachers, embedded within classrooms. Give schools the freedom (through less regulation) and the responsibility to choose what and how they can teach (within a suggested curriculum but without required external assessments, especially in the elementary grades), and they will bring lasting educational reform.

In a December 2016 video, *Education Week* reporter Arianna Prothero broke down the different forms of public and private school choice. Private school choice—which allows parents to use tax-funded vouchers to send their children to private schools—touches on an array of tough questions about parents' and students' rights, church-state separation, and, as some people see it, the very survival of public schools. Prothero further states that by comparison, public school choice, in its various forms, gives parents the option of transferring their children out of

lower-performing public schools to higher-performing public schools., which is fine, but should we not consider honestly why one school is higher-performing than another school, as well consider what measures are used to make that determination?

David expands on Prothero's points by observing that observed that choice does not necessarily mean comparing higher-performing vs lower-performing schools. He suggested that families might choose to have their children attend a particular school instead of a dictated school for a variety of reasons. Perhaps true, but most parents would certainly consider the quality of a school, based upon their own notions of what makes a school "good."

David also pointed out that I seem conflicted about what it means for a school to be a "good school," or a higher-performing school. On the one hand, he points out that I oppose assessment and dictated standards, but on the other hand, I want families to have access to "good" and "higher-performing" schools, which is usually defined by standardized tests. He is right: I am conflicted. I am trying to reconcile the reality of today's climate surrounding accountability with what I believe to be in the best interest of students. I am not opposed to assessments if they help teachers make good instructional decisions for students, but I am opposed to the overreliance of tests to determine the effectiveness of teachers.

I do not think school choice (between public, private, or charter) as the reason for improving schools, but rather the improved quality of the teaching in the classrooms, adequate resources in the schools, and the support in youngsters' homes that make the difference in the success of students. There is an argument that choice would be the cause for all of those changes, but I remain unconvinced. Why cannot the efforts and resources be given to provide to all public schools what is found in all good schools, whether public or private? Why cannot our focus be on policy decisions that affect all students in all schools and not just some students in some

schools? If all “failing” public schools closed today, where would those youngsters go?

Assuming that all charter schools provide a better education, which is debatable, there are not enough charter (or even private) schools to accommodate all of the students who might be attending “failing” schools. What if the necessary supports were provided to all schools, so that all students could receive a quality education? If that were the case, then choice among schools would not matter at all: Every student would receive a quality education, regardless of the school of choice. I could support school choice in all ways if all schools (public or private) did not have to deal with the burden of accreditation and were funded to meet the needs of all children. That would mean many more teachers to provide the adequate support for those children who struggle early on. We should use whatever funds that are available to hire more teachers to teach those who have fallen behind, instead of providing funds for vouchers.

However, David points out that more money into schools has not improved public schools. My reply is that we have spent too much money on the wrong things in education, but money spent for the right services does improve education, especially for those students who struggle and have challenges at home.

Overall, I am inclined to agree with David’s observation of great value in having various kinds and levels of schools. He observes:

> The idea that every child should receive an identical education, regardless of ability and desire, is a flawed model. And it is a model that is impossible to deliver, by the way. It is also a model that leads quite directly to our hated accreditation burden. We have no need whatsoever for accreditation if all schools are private schools. Schools that survive will do so because they pass what economists call "the market test." That is, they attract sufficient families who are

> willing and able to pay for them that the school can survive, and if for profit, survive and prosper. I see no reason that some child who lacks either motivation or native ability should not have to pass entrance requirements of any particular school. To do otherwise is neither desirable not workable.

We should and could have schools that cater to students of differing needs and desires. We already have such special schools for blind and deaf children, which is, in my opinion, as it should be. Other characteristics of children should also have particular kinds of schools that offer particular kinds of instruction. For example, children who have reading disabilities, or children who have particular kinds of autism, etc. The notion that one size fits all, and that all providers should be able to fit all sizes is flawed.

We need no laws that prescribe standards for education. I am perfectly comfortable with families making decisions about the schools they want their children to attend. Aside from the same sorts of issues we face with foster care social services, K-12 poses no special case that requires educational standards. Most families want the best quality K-12 education for their children that they can afford, don't they?

The idea that we should use tax dollars to hire more teachers to provide services for students who have fallen behind strikes me as both undesirable and unworkable. I don't think that schools can provide remedies for what are really failures of families and failures of culture.

I would suggest that we should do just the opposite: It is both desirable and workable that more support should be given to help those students who have fallen behind. Whatever the

failures of families and culture may be, it is our responsibilities as teachers to provide support to those students who face the greatest challenges.

I can speak from first-hand experience about struggling readers. There is abundance evidence over the last thirty years that we know what to do instructionally to help catch youngster up who struggle with reading in the early grades. The problem has been (and continues to be) that we do not have enough knowledgeable teachers to tutor all those youngsters who are behind in reading, and more teachers mean more funding for that purpose.

Finding Common Ground

While David and I did not reach agreement on the benefits of the free-market model in public education, we were able to identify statements about K-12 education upon which we could agree. Over the course of our conversations, we identified nine statements, representing areas of agreement:

1.) Public education generates positives externalities.

2.) Both public and private schools are heterogeneous; some are strong, some are weak, and most are somehow managing to educate most of the kids they serve to a reasonable level of reading, writing, and arithmetic.

3.) Teachers in the public system are grossly underpaid, compared to incomes earned by people in other walks of publicly financed jobs.

4.) Weak teachers in public and private schools tend to get paid the same as strong teachers.

5.) A super majority of people believe that K-12 education is valuable and they are willing to pay for it; that is not to say they are willing or able to pay an unlimited amount for it.

6.) There is a shortage of licensed teachers in some teaching areas and in some

geographical areas of the U. S.

7.) A teacher shortage could be reduced if fewer teachers left teaching within the first three years of their being employed as teachers.

8.) We want all children to learn and make progress at each grade level.

9.) The less government oversight and fewer regulations the better for all schools.

While some of the statements require little explanation, others provide an opportunity for explanations from our different perspectives. First, concerning public education as generating positive externalities.

Public Education Generates Positive Externalities

Education is often (but incorrectly) viewed as a "public good," which is defined generally as something consumed by one individual that does not actually, or potentially, reduce the amount of that something available to be consumed by another individual. David pointed out that public education does not meet the economic definition and meaning of a public good.

The definition of a public good for economics is: 1.) a good that everyone in a community or country consumes all of; 2.) people who do not pay for the good cannot be excluded from consuming the good; 3.) adding an additional consumer does not diminish the quantity of the good available to be consumed by all in the community or country; and 4.) the additional cost of adding an additional consumer is zero. In the strict economic sense, public education does not meet these defining elements of a public good. However, education, whether provided publicly or privately, generates spillover benefits (or positive externalities) for people, other than just for the people being educated. That is to say, others benefit when children are educated, even though those others are not being educated.

Schools are Heterogeneous

I cannot deny that schools vary in quality, but to understand more clearly the complexity of this statement requires recognition of several questions: 1.) How do we define the "quality" of a school? 2.) What measures should be used to judge the quality of a school? 3.) What are possible reasons for the heterogeneity among schools? 4.) What should (or can) be done to improve all schools and reduce existing achievement gaps among specific groups of students?

Reaching agreement on how to define the "quality" of a school is not a simple matter and a challenging one. My definition of a good school is quite different from how many politicians, legislators, and school administrators often define a good school. A good school in my view may best be defined as a school where every teacher helps every student make at least a year's progress in a year's time, regardless of where those students were at the beginning of the school year. Others appear to define a good school as a school with good test scores.

While we may be tempted (as many legislators are) to use easily identifiable measures (e.g., standardized test scores) to judge the quality of a school (and the quality of teachers for that matter), the quality of a school is determined by many interrelated factors whose relationships are complex, and the direction of causality is not so simple to identify and isolate from one another. For example, factors offered as reasons for the variance in the quality of schools include: 1.) the cognitive abilities of students, 2.) family circumstances of students, including the parents' socio-economic status and/or the parent's educational levels 3.) the quality and effectiveness of the teachers, and 4.) the resources available to support the daily operation of the school, which include the physical plant and the materials used within the classrooms.

David observed that education is like golf; there is no such thing as a perfect game, but pretty good and pretty bad performance are both easy to identify. I agree that one would think so

in general, except that part of our dilemma in evaluating good or bad teaching is that there continues to be debate as to how good teaching should be defined. We both agree that defining "good teaching" is a real challenge, and we agree that educational outcomes (however those are defined—another challenge) are different but not related exclusively to the act of teaching. We also agree that whatever good teaching is, it is likely quite different in the primary grades compared to the middle grades and high school.

David observed that "…private schools are usually strong, because people won't pay for weak private schools, with the possible exception of faith-based private schools." While that may be true in a non-comparative sense, I think that it is important to consider that private schools are no stronger than public schools if demographics are held constant when comparing private schools and public schools (Ravitch, 2020). I would suggest that some private schools are better because of the backgrounds of their students (specifically, the education levels and incomes of their parents), not so much because of better teachers.

David also suggested that all schools cannot be of the same "quality" because all people are not clones and that people are different in so many ways. While true that people are different, difference does not mean that all schools (more specifically, the teaching within schools) cannot be of a high quality. The quality of teachers and quality of instruction are separate (but related) issues to the quality of students that attend a school. Most often today, quality of teaching is defined by standardized outcome measures with little regard for where students are at the beginning of a school year and the degree of progress (what has been learned) at the end of a school year. Furthermore, I do not view quality as the same as equality and sameness. In fact, differentiation of instruction (especially in the earlier grades) is necessary for the highest quality of instruction for all—an irony that few people recognize.

With respect to a market-based solution (and school choice) as the way to improve the quality of schools, David points out that:

> We must change the foundation of the entire public school system so that schools of many varieties could and would arise with totally voluntary exchange financed by fee for service. Such schools would meet the market test or fail to meet the market test, according to households being willing to purchase K-12 education from them or not. The market test is the only valid test, and ordinary people are fully equipped to administer the market test to would-be suppliers of K-12 education.

A free-market model means privatization and profits and losses. Profit is not a bad thing; profit at the expense of the quality of children's education is. The evidence is mixed at best that allowing school choice (through charter schools and vouchers) results in a more positive outcome for students. If the results of school choice were convincingly positive, then I would be more willing to consider changing the foundational structure of public education.

I recognize the challenge of resolving the dilemma we face now where advocates of public schooling object to the use of public tax dollars to fund (through vouchers) the cost of tuition for students enrolled in religious schools where the curricula is religious in content and could be considered less accepting of diversity, while parents advocating school choice who pay public tax dollars object to their taxes funding public schools where the curricula is inconsistent with their beliefs.

I believe that we should keep the basic structure of public schooling and provide the support required to meet the needs of all students, especially those who come to schools from challenging backgrounds. Schools should be a public service, which should not be replaced with a free market, and school choice should not be acceptable as a low-cost substitute for adequate

funding (Ravitch, 2020).

Teachers are Underpaid

David and I agree that good K-12 teachers are worth as much as other professionals and education bureaucrats with all their assessment and regulations are worth considerably less. David and I also agree that an important key to improved K-12 education hinges on teachers, but he suggests that if we had a completely privatized K-12 education industry — no public schools as we know them, charter or otherwise — teachers would be paid what they are worth, as determined by the market. If safeguards could be in place for assurances that children's education would not suffer in such a transformation, I might be willing to support the initiative. However, is privatizing public schools the only way to improve teachers' salaries? Probably not. A market model is based on the concept of supply and demand, but there is a teacher's shortage today and yet teachers' salaries are not improving, and neither are the qualifications of beginning teachers.

Charles Krauthammer argued for the medical profession to be free of government regulations and medical doctors to be responsible for their own decisions and profession. David suggested that if teachers employed the methods of doctors — forming professional associations instead of labor unions, and lobbying the state to require extended training and licensure for K-12 teachers — the quality of teachers and their remuneration would rise; perhaps not to the level doctors have achieved, but rise substantially. Probably. Furthermore, David does not favor licensure requirements imposed by the state, but admits that it works to raise the income of the licensees. He would prefer certification, much like CPAs and CFAs and engineers. While there is a National Board of Certification for teachers, it is an advanced certification beyond initial licensure. David sees no way to change the system without changing the foundation of the entire

institution, and he may be right.

Weak Teachers Paid the Same as Strong Teachers

An uncomfortable fact for me. I cannot defend paying a poor and ineffective teacher the same as a good and effective teacher. However, two challenges for accomplishing this include: 1.) defining what a good teacher is; and 2.) developing a process for evaluating a teacher's effectiveness (Green, 2019). I would suggest an alternative (and more expensive) way of meeting this challenge, and that is, that we make a greater effort in teacher training to graduate more qualified beginning teachers and to support more extensive professional development for teachers once hired. In practice, that might mean a longer internship for candidates and perhaps even a Master's degree in education before being hired. Finland, regarded as one of the best educational systems in the world, requires teachers to have a Master's degree.

K-12 Public Education Is Valuable and a Super Majority of People Support Its Funding Using Tax Dollars

A true statement, but David observed that the public "is not willing or able to pay an unlimited amount for it." I would suggest that we are nowhere near an unlimited amount.

A Shortage of Licensed Teachers in Certain Geographical Areas

A statistical fact. For example, Garcia and Weiss (2019) report that the shortage is worse than we thought and is growing across many states and content areas. On a more personal and local note, our teacher education candidates who enroll in their teaching internships at UVA-Wise are hired before they complete their internships, and many are hired before they even begin their internships, which is a recent phenomenon, apparently because filling teaching positions in local schools has become such a challenge.

Reducing the Teacher Shortage

There is no doubt that if fewer teachers left the profession within the first three years of their employment as teachers, the shortage could be reduced. The question is: What can be done to increase the likelihood of this happening? Many people throughout the U. S. are trying to find a solution to this problem. Unfortunately, some solutions may not improve education in this country in the long term. For example, the bar for beginning teacher qualifications has been lowered, as many school districts are desperately seeking new teachers to fill classrooms; consequently, waivers are being granted to licensure requirements that are in place and alternative paths to licensure are now available. One result is that we sometimes have the least well-trained teacher candidates being hired to teach in some of the most challenging school situations, which is just the opposite kind of circumstance we find in some of the best educational systems in the world where teachers are very well trained, well paid, and freed from standardized testing regulations.

We All Want Children to Learn

David agrees that we WANT all children to learn and make progress at each grade level, but can we get what we want from public schools? I think, yes. Can we get that outcome from some system we can design? Again, I think, yes, but I believe that the key will be a focus on the interaction in the classroom between teachers and students and the resources available for those interactions, and not so dependent upon standardized assessments, mandated curricula, or some organizational structure legislated from the federal level.

The Less Federal Government Oversight and Fewer Regulations the Better

My greatest frustrations relate to government's control of what and how teachers teach. How do we change that? Let us not forget that the first charter schools were public schools

(envisioned by Albert Shanker, a teacher union advocate in the 1980's) and were created to allow public school teachers to experiment. Why cannot all schools be charter schools with teachers free to do what they deem best for their students? The answer: Legislators will not let them. A point on which David and I agree. Too little trust by government—a government that supposedly represents those who elected them.

David observed that for goods bought and sold in free markets, quality is judged entirely by buyers. Buyers purchase whatever quality of a good they desire. Typically, for most economic goods, we see a range of different qualities, which is a good thing. Neither are children and schools the same, regardless of the political thought on education. David further noted that for public K-12 education, we do not have buyers and sellers. One very important outcome of public education is that government operatives do indeed attempt to impose a standard quality across all K-12 education on which they can get their hands. But one size does not fit all in education any better than it does for other economic goods, another point on which we agree.

A remaining question (and "elephant in the room") is: How do we move to universal K-12 education that is publicly financed, but not publicly administered? David observed rightly that government has not been willing to give money to states or localities without having a say in what the expected outcome is, forgetting that the money they "give" is money that taxpayers "gave" them. How can this change? David observed:

> It seems to me that government operatives have never been and never will be satisfied to have any economic good financed publicly that is produced and administered privately.
>
> Government operatives will fail in their efforts to "administer" a standard quality for variety of reasons. The first reason is that there is no clear,

indisputable, unambiguous standard or benchmark that makes sense. The second is that government operatives cannot impose a common standard, even if one were available.

I offer up that schools of many varieties could and would arise with totally voluntary exchange financed by fee for service. Such schools would meet the market test or fail to meet the market test, according to households being willing to purchase K-12 education from them or not. The market test is the only valid test, and ordinary people are fully equipped to administer the market test to would-be suppliers of K-12 education. But not financed with public money. Private money is fine.

Closing Thoughts

David believes entirely in voluntary choice in our lives. He is opposed to compulsion of one by another in all but the most obvious and extreme circumstances and is unable to see how compelling families to pay for and send their children to particular schools is anything but unjust compulsion. At present, David cannot see any ideas that will change his opinion about compelling people, but he promises to keep listening.

I appreciate his willingness to listen. Listening is what is missing from most discussions about school choice. Over these past few years, we both listened to each other, and I may have moved closer to David's view than he toward mine, but we did find common ground.

From my perspective, there are two challenges that prevent advocates of school choice from moving closer to compromise: First, their unwillingness not to view schools as an industry (although I admit that public schools can be seen as a public monopoly), and second, their lack of caution when trying to apply an economic theory to public school reform. We should remain cautious about abandoning a system of public schooling that has served us well historically.

David notes that tax dollar funding of education for all is not a market system. From his perspective, education should be funded from tax dollars only for families whose income is sufficiently low. Moreover, in a true market system, he argues, all schools would be private schools, either not-for-profit, or for profit. None would be government schools. Maybe David has convinced me of his view without my knowing it, but I could support the notion of all public schools becoming private, if they all received sufficient resources to meet the needs of all of their students, and operated as not-for-profit institutions. I envision school reform motivated by improving the quality of education within classrooms and doing what is best for students, not reform motivated by profits. Profit is not a bad thing except when it happens at the expense of students' learning, which has often been the case with respect to charter schools and vouchers (Ravitch, 2020).

David's and my purpose from the beginning of this exercise was not so much to persuade the other to change views about a free-market approach and school choice in the U. S. but to become more informed about the other's viewpoint. As David wrote in one of our most recent exchanges: "I have not tried to convince you about a true free market, but I have tried to explain as best I can why I have complete confidence in voluntary exchange, including for education of our children, compared to government compulsion."

I feel less successful about my explanations of relevant issues surrounding school choice as David was in his explanations about his reasons for believing in the possibilities of a free-market model applied to education in the U. S. However, I am encouraged that we found agreement on several issues and agreement on perhaps the most significant one that might bring our two different views closer together: the overreach of federal and state regulations and requirements in the form of accountability measures. Perhaps upon this one point of agreement

might both sides of the issue begin to find ways to reduce government oversight, bureaucratic interference, and give choice to parents and teachers alike? If public schools were freed from many of the federal mandates today, I remain confident that public schools would remain the choice of most parents, and public schools would compete just fine.

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Reducing Food Access Disparities: Promising Practices in Equity, Engagement, and Collaboration

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Abstract

In Virginia and across the US, sustainable food access is an ongoing challenge. Factors such as a lack of transportation, systemic racism, and educational disparities have all contributed to Virginia's food insecurity rate of approximately 10 percent, with the coronavirus pandemic increasing food insecurity rates to as much as 22.5 percent in 2020 (Virginia Department of Social Services). In an effort to combat this growing problem, public agencies and nonprofit organizations are working together to eliminate barriers to food access. They are also engaging with members of the community who are impacted by food insecurity in an effort to center those who are historically marginalized. To identify the best approaches to this problem, this perspective shares insights gathered by a transdisciplinary team of researchers working to identify promising practices in food access promotion in the greater Richmond area of Virginia. Data, feedback, and recommendations were gathered from advocates and organizations working to combat food insecurity, with a focus on collaboration and equity.

Introduction

The inability of Americans to sustainably access food is often conceptualized as a systemic problem associated with a number of broad social problems, namely the continued existence of systemic hunger as a social ill, the obesity epidemic, and the erosion of the social

safety net under neoliberalism (Koh et al., 2011; Fisher, 2017; Poppendieck, 1999; Winne, 2008). On the global scale, the elimination of hunger is one of United Nations' Sustainable Development Goals, and food insecurity is conceptually intertwined with several other goals (United Nations, 2021). Within the U.S., policy interventions to mitigate hunger beginning in the 1960s have slowly given way to a broader recognition that sustained access to food, especially healthy food, is a social determinant of health (Christaldi and Castellanos, 2017).

Domestically, food insecurity is commonly conceptualized as both the physical lack of any food to eat as well as lacking access to a healthy diet. Sustained lack of consumption of nutritionally dense foods can lead to a number of negative health consequences including diabetes, poor oral health, and a number of chronic diseases (Muirhead et al. 2009; Seligman et al. 2010). Food insecurity also creates negative outcomes for society through loss in worker productivity (Lee, 2013, Phipps et al. 2016). While improving access to food has been a priority for government, civil society institutions, and scholars for several decades, most of these efforts have lacked a true focus on equity within their community engagement. Through this perspective, our team aims to address this lack of focus.

This perspective discusses ongoing collaborative research and community outreach efforts aiming to increase the sustainability of food access, as well as food systems more generally. The authors are a transdisciplinary team of researchers at Virginia Commonwealth University (VCU) located in Richmond, one of Virginia's major cities, with expertise in Engineering, Life Sciences, Social Work, and Public Administration. Our faculty team is part of the Sustainable Food Access Transdisciplinary Core, supported by the Institute for Inclusion, Inquiry, and Innovation (iCubed) at VCU. The community outreach efforts described here were supported by a National Science Foundation planning grant.

In this article, we discuss our successes and challenges in our ongoing community engagement efforts focused on equity-based collaboration and community engagement. We employ a social-ecological model to inform the presentation of our efforts, which we summarize before outlining our recent efforts and providing a number of lessons we have learned. While similar efforts have and will continue to occur in other communities around the U.S., and the world, it is also important to document the efforts experienced across diverse and local communities for comparison.

Background and Literature review

Overview of Disparities in Food Access

Disparities in access to food are subordinate to the broader problem of food insecurity. Food insecurity has a number of conceptualizations, which have evolved in recent decades, but are generally understood by the U.S. government as limited or uncertain a) "availability of nutritionally adequate and safe [in a pathogenic sense] food", and b) "ability to acquire acceptable foods in socially acceptable ways" (Anderson, 1990). Food insecurity is related to, but distinctly different from, hunger, as hunger is generally accepted through bureaucratic and scholarly lenses as the pain or other physical discomforts associated with a lack of food (Anderson, 1990; National Research Council, 2006). Food insecurity's conceptualization also differs from hunger as it includes a nutritional component; consequently a difference in response emerges to these interrelated problems based on the nutritional value of food provided (Feldman and Schwartz, 2018; Ross, Campbell, and Webb, 2013). Additionally, broader interpretations of food insecurity also include the need to look at the cultural appropriateness of food available to a given individual when considering their security (Sampson and Willis, 2013).

Measurements of hunger and food insecurity at the federal level have evolved along with conceptualizations of the two concepts since the 1960s (Christaldi and Castellanos, 2017). Currently, the United States Department of Agriculture (USDA) uses a four-level system to measure the state of an individual's food security: very low, low, marginal, and secure. Individuals in the lowest two levels (i.e., very low and low food security) are generally considered food insecure (NRC, 2006).

National-Scale Food Access Problems

According to the USDA Economic Research Service (ERS) in 2019, 10.5 percent of all U.S. households experienced low or very low food insecurity; roughly 13.7 million households in total (Coleman-Jensen et al, 2020). Previous ERS research from 2019 suggests that food insecurity is strongly uneven across ethnic and racial boundaries, with African-Americans twice as insecure as the national average (22.5 percent versus 12.3 percent, respectively) and non-white Hispanics at nearly 50 percent more (18.5 percent versus 12.3 percent, respectively) (Coleman-Jensen et al., 2020). Beyond race and ethnicity, other factors can increase rates of household food insecurity, often dramatically. Examples include the presence of children; the presence of children under the age of six; households with one parent; and households below 185 percent of the poverty threshold (Coleman-Jensen et al., 2019). Often these factors are interrelated. The COVID-19 epidemic that hit the US in the first quarter of 2020 has exacerbated this problem nationally due to a combination of job loss, disruptions to food production and distribution, school closure, and general economic contraction.

There are also nation-wide challenges in gathering data related to food access. Some steps are being taken to address this, e.g. investing in new technologies, improved data analytics,

and smart services (Alharbi and Soh, 2019; Li, Song, and Zeng, 2017). In the U.S., in late 2015, the new “smart cities" initiative invested over $160 million in federal research to help communities tackle local challenges and improve city services (White House, 2015). Improving the quality of life, economic competitiveness, and sustainability are the three main goals for a smart city initiative.

We are working to leverage research in smart technologies and are developing a data-integrated model-based decision support system to help address the food access problem. Through the power of data analytics, smart cities have the potential to improve the economy by reducing operational costs and increasing quality of life for citizens (Silva, Khan, and Han, 2018). In order to ensure that the data used is reflective of community needs, members of the community must be fully engaged in the data collection process and seen as collaborators. New collaboration and data access technologies will help connect the various groups in the community working on food related problems. Ultimately, new collaborations and technologies can help build a platform in which impacted groups can share resources, discuss ongoing efforts and future plans, and collaborate on current initiatives.

Virginia-Specific Food Access Problems

Many Virginians suffer from some form of food insecurity. The USDA reported that 9.2 percent of all Virginia households, roughly 308,000 households, were food insecure at some point during 2019 (Coleman-Jensen et al, 2020). Statewide redemption of the Supplemental Food Assistance Program (SNAP) was 687,984 persons in March 2020, or roughly 8 percent of the total population (US Department of Agriculture, 2021).

As of the time this article was written, the COVID-19 pandemic continues. While a

complete picture of the disaster effects of COVID-19 on food insecurity will not be fully understood until the crisis is completely behind us, current data paints a bleak picture. One estimate from early in the crisis suggested that food insecurity doubled for all Virginians, and tripled among children (Schanzenbach and Pitts, 2020). SNAP redemption increased by 10.3 percent from March 2020 to March 2021 (US Department of Agriculture, 2021). Feedmore, the food bank for Central Virginia, reported that 39,000 more people were suffering from food insecurity in their service region due to COVID, a 27 percent increase (Feedmore, 2021).

Problems with existing interventions

Food insecurity has geographic and built environment dimensions, with higher rates of food insecurity occurring in both urban areas and remote rural spaces (Coleman-Jensen et al, 2019). Most commonly, these dimensions are expressed through the concept of *food deserts*, or regions where retail options for food generally, or healthy food specifically, are limited or non-existent. At first glance, the idea that simply improving access to healthy food will encourage healthier residents is an obvious one. However, scholars from a variety of differing fields have offered critiques or improvements to this concept. Lucan (2015) shows that different food desert mapping techniques employed can dramatically change what regions meet food deserts conditions. Osorio, Corradini, and Williams (2013) advance the additional concepts of *food swamps* (e.g., where food is accessible and safe but not nutritious), as well as *food brownfields* (e.g., food is accessible and nutritious but unsafe). Larchet (2014) observed that socio-economic and cultural factors may affect individual food choices more than simply the ability to access healthier foods. Larchet (2014) also questioned the objectivity of which foods are considered healthy by predominantly white, educated, middle class individuals interested in encouraging

food system development in food deserts. Zimmerman (2015) echoes this latter point in her critique of classed and race-based advice on healthy food consumption by popular food writers and public health officials. Most telling, two of the earliest researchers of food deserts urge caution on the causation between geographic access and health behaviors and outcomes (Cummins and Macintyre, 2006).

In many regions, previous efforts to improve access to food, as well as broader food system development, can often be characterized as top-down approaches by political and institutional elites, led by individuals who would likely identify as some combination of highly educated, middle-class, or white/Caucasian. Numerous critiques exist against interventions led by such institutions and/or individuals (Farnsworth, 2017; Ghose and Pettygrove, 2014; Larchet, 2014; McClintock, 2014; Passidomo, 2014; Reynolds and Cohen, 2016).

Thus, an increased focus on equitable community engagement is highly desirable. Arnstein (1969) developed a "Ladder of Citizen Engagement", which sought to present a conceptual and hierarchical view of how communities can be actively engaged from "nonparticipation" to the highest rung that includes steps toward "citizen power". While we are unaware of any previous scholarship applying the Ladder of Citizen Participation to local food system development, the conceptualization is insightful. Any group seeking to address food access disparities through an equity perspective should strive to achieve at least the sixth rung of Arnstein's Ladder, "Partnership". To achieve such a level of engagement, decision-making and planning is shared between power holders and citizens.

Interdisciplinary approaches to improving food access

The aforementioned issues and challenges typically cannot be solved by one single method

or approach; rather, multiple disciplines are necessary to forge new solutions that emerge from interdisciplinary connections. This type of research, especially when STEM and social sciences are combined, has been shown to have significantly higher levels of impact with significantly greater longevity (Van Noorden, 2015 and Okamura, 2019). This is especially true when considering food access, as social, racial, and cultural barriers can greatly influence one's ability to have (or not have) access. Thus, our team aimed to dismantle silos between fields to identify unique solutions on the horizon that stem from our different disciplines (Zohrabi et al. 2021).

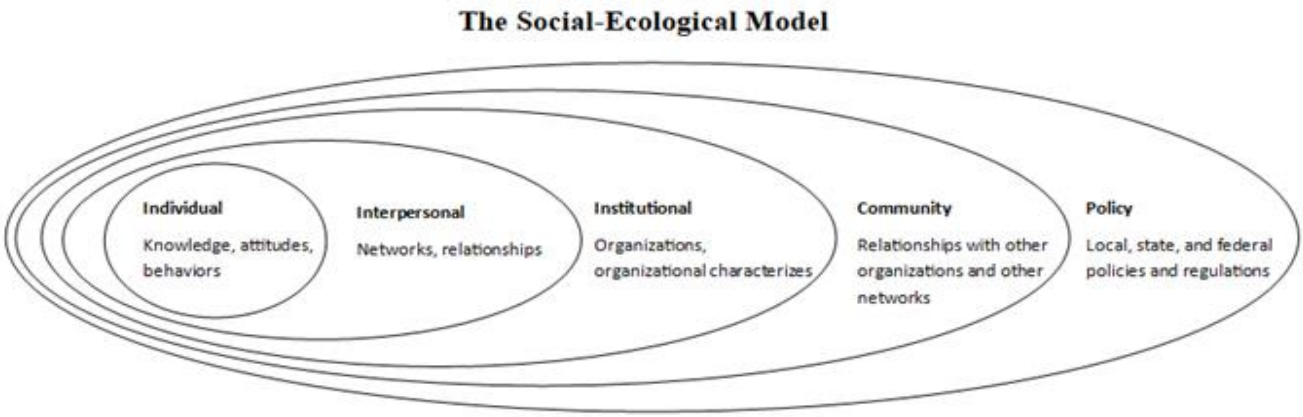
The importance of an interdisciplinary approach is reflected in our research team. Our members have experience in a variety of fields and topics, including food systems (e.g. sustainability and health in rural areas, policies and politics of local food systems, and urban agriculture viability), urban design/planning (e.g. creating smart cities), community needs (e.g. social equity and the cultural/political landscape of urban areas), and technical skills (e.g. GIS and modeling). Combinations of different theoretical and empirical constructs create interdisciplinary outcomes in solving food insecurity. Cities differ greatly in size, age, and cultural/political/financial status across geographic scales, and thus, generalizations cannot always be made. However, approaches that include diverse teams, like the one assembled here with backgrounds that cut across disciplines, can only increase communication in multiple perspectives.

The analytical framework discussed in the following section is an example of an interdisciplinary approach, as individuals and organizations from different perspectives and experiences can come together to create solutions.

Analytical framework: The social-ecological model

When considering ways of promoting food access, we can use a macro perspective to consider the community in which individuals and organizations operate, as well as a micro perspective to consider personal relationships between individuals and others. The social-ecological model, pictured in Figure 1 can help us consider both of these viewpoints, as it shows the ways in which various aspects of society are connected at different levels.

Figure 1: The Social-Ecological Model



Adapted from McLeroy, Bibeau, Steckler, and Glanz (1998)

With this model, each oval is impacted in different ways by the ovals within it. Every person and every group is interconnected. Each individual, as well as their knowledge, attitudes, and behaviors, makes an impact on those closest to them at the interpersonal level. The individual also impacts the institutions with which they are affiliated, as well as their greater community. In addition, the individual impacts and is impacted by local, state, and federal policies and regulations. Though closer circles will have a larger impact (for example, an individual is likely more able to influence those with whom they have close relationships than communities or public policy as a whole), more distant circles can still see significant ripples

(Kilanowski, 2017). While it may take some extra work, the actions of an individual, as well as the actions of many individuals working together, can significantly influence their community and public policies both positively and negatively.

Using an interpersonal point of view, we can better understand the ways in which groups of individuals working together can make an impact. These interpersonal relationships can in turn influence the institutions with which these individuals are involved, including the values and objectives of those institutions. Institutions can work together to impact their communities, creating networks and reflecting the values and goals of each institution and the individuals that create them. Finally, at the policy level, we can consider ways in which policies influence and are influenced by the communities in which they operate. These policies are typically created and implemented by community leaders and their constituents, and empower and constrain those working in the community.

The social-ecological model of food access

We can now consider this model from the point of view of those working to promote food access in their communities. The chart below using data gathered from participants to provide examples of how those working in food access can operate within and be influenced by their society as whole:

The Social-Ecological Model of Food Access	
Level	**Examples**
Individual	● A commitment to the goals of their organization ● A commitment to striving for equity in food access ● Valuing their relationships with others

Interpersonal	● Trust and transparency between groups of individuals ● Clear and open communication between groups of individuals ● Common goals
Institutional	● A commitment to equitable data collection practices ● Efforts to learn about the experiences of the community ● Efforts made to promote food access that are reflective of community experiences
Community	● Relationships between individuals and organizations ● Multiple organizations working together to promote food access ● Organizations and individuals working together to influence and advocate for policies to increase food access
Policy	● Creating policies based on data gathered from the community ● Creating policies that are equitable ● Creating space and opportunities for those impacted by food insecurity to play a role in the policy-making process

As is shown in the chart, those working to promote food access within their communities are responsible to and for different people, different organizations, and different ideas. While at the first three levels these individuals are primarily focused on their own work and the work of institutions with which they are affiliated, at the community and policy levels they begin to give more consideration to the macro level. They look beyond their institution's immediate work, and consider the impact of programs and services on those in the community. At the community level, these individuals may take into account relationships with other individuals in the community, as well as with other community institutions. This includes those impacted by the work being done by the institution, those who could potentially benefit from the institution's work even if they are not currently benefiting, or other institutions engaging in the same type of work, or complementary work, as their institution.

Methodology

Project overview

This project used an integrated, transdisciplinary approach to critically evaluate existing food systems and to develop novel approaches to promoting food access. This project focused primarily on Richmond as a city in the Southeastern United States and neighboring counties. In this effort, the project team engaged with community leaders, community organizations, and other stakeholders to quantitatively and qualitatively assess the key challenges to combating sustainable food insecurity, with a goal of creating the knowledge and tools for community-based sustainable food system development.

Community workshops

Our team organized workshops in which local food access leaders were invited to participate. This included advocates working to promote food access, representatives from nonprofit and government agencies, and leaders representing local communities that often experience food insecurity. We hoped to learn more about participants' experiences in promoting food access at the organizational, institutional, and community levels; how interpersonal collaborations could help promote food access; and how experiences could help shape public policies.

The initial workshop, held in October 2020, focused on framing the food desert problem in the local community (including a major city and the surrounding counties). Thirty-five participants attended from various backgrounds, including community engagement, science/research, health and nutrition, policy, and student services.

During the workshop, participants were invited to share their efforts to promote food access as well as challenges and successes they experienced during these efforts. Perspectives were collected during breakout sessions in which participants could learn more about a particular area of interest. Topics for these groups are presented in Figure 2 below.

Figure 2: Breakout group focus areas

Research questions

Information provided by participants during this workshop and the breakout sessions was used to address the following research questions:

1. In what ways is "equity" defined and perceived in efforts to promote food access?
2. What are promising practices for collaborating and community engagement when working to promote equitable food access?
3. What barriers to collaborating and community engagement exist when working to promote equitable food access?
4. In what ways can interactions between individuals, groups, and organizations be improved to also improve collaborations and community engagement initiatives?

Answers to these questions are addressed in the following section, and are framed using the social-ecological model.

Findings and lessons learned

Key elements and values of community engagement

We asked workshop participants for their thoughts on the key elements and values of community engagement. In other words, what actions should be taken at the individual, interpersonal, and institutional levels to form strong community relationships? Elements discussed by workshop participants included transparency in decision-making, resource sharing, and providing updates and information to the community over the course of the project.

In addition, the idea of alignment was often addressed. While alignment is crucial to any collaboration or engagement initiative, in the case of food access alignment can take multiple forms, typically at the interpersonal and organizational levels. This may include:

- Ensuring that collaborators have a common definition for an understanding of "equity,"
- Having a common understanding of the scope of the problem (i.e. – local, regional, etc.),
- Ensuring that collaborators have common goals,
- Ensuring that there is agreement as to how to reach those (i.e. - choosing to focus on promoting food access among certain populations and/or in certain geographic areas),
- Creating forums and other opportunities in which individuals/groups working in this area can share resources, discuss ongoing efforts and future plans, and collaborate, and
- Providing education about the benefits of seeking and buying, as eating habits are hard to break. This also includes providing the support and opportunities needed to access

healthy food.

Working for alignment can also lead to influences at the policy level. When individuals and organizations are aligned in working toward a common goal, they are better able to articulate needs and goals that should be addressed by policy.

The idea of "knowing the community" was another frequent point of discussion. In this case, actions at the interpersonal level should guide work being done at the organizational, community, and policy levels. Participants often discussed the substantial efforts needed to truly engage with the community, e.g. door-to-door initiatives to discuss food access with community members and meetings with grocery store managers/staff. Though community outreach may take time to develop correctly, it can also yield valuable information that guides the work being done. As one participant stated:

> *"Community engagement means knocking on peoples' doors to see how they feel, and this is something that should be considered...This will definitely take us a substantial amount of time."*

In the words of another participant:

> *"People want to see themselves and see what is truly heard from them. They want to experience what is pushed forward."*

Rather than have decisions made for them, those experiencing food insecurity want to know that their perspectives are heard and valued. In addition to outreach efforts such as the door-to-door initiative discussed by the participant, equitable data collection practices can also ensure that community-informed decisions are being made. This is discussed further in the following section.

Equitable data collection

Data frequently drives the decision-making process, and the way in which data is collected has a strong influence on findings and subsequent recommendations and actions. The way in which organizations collect, use, and present data impacts how it is shared with the community, which in turn impacts how findings from the data influence policy. We asked workshop participants for their perspectives on how data related to food access could best be collected. Some discussed the importance of using qualitative methods in addition to quantitative; as one participant stated: *"Some data can only be qualitative, not quantitative. We should focus to include all data."*

Other participants agreed, and discussed how quantitative data doesn't necessarily show nuance. For example, quantitative data may show that a community does not struggle with food access as it is located near a grocery store. However, conversations with the community show that many in the community do not have a personal mode of transportation, and that a lack of sidewalks, benches, and ramps make it difficult for members of the community to actually make the trip. In this case, the interaction between the individuals and the organization (grocery store) were not fully captured by quantitative data alone.

Using informal data collection methods can also have benefits. In one case, a local food provider uses federal SNAP data to anticipate demand. However, not all populations are comfortable sharing their information with the SNAP program. Members of the immigrant community, for example, may be hesitant to share their data if they have not yet become citizens due to concerns over deportation. By focusing on the SNAP data only, the food provider was missing important information. Although their formal policies dictated that the SNAP data be used, the organization found success by building interpersonal relationships with individual

community members to learn more about their true needs.

By seeking these stories, those working to promote food access can gain a better understanding of the true experiences of the community. As one participant stated:

> *"The advice I can give you is that everything is in your data. Record [people's] stories (what people try to tell you) and stories of people who have experienced food insecurity."*

Another participant noted the importance of sharing data collected by organizations with the community:

> *"People want to see results. They want to see the goals are achieved, and what they benefit from. [To quote an African American activist]: 'We, blacks, are analyzed to death, but there is nothing improved'."*

By sharing data, individuals on whom the data was based can feel more heard, recognized, and valued.

Outreach in the age of COVID-19

As a great deal of the project work took place in 2020, the coronavirus pandemic impacted the team's outreach efforts. As has been common during the pandemic, meetings and events were converted to an online format. Interestingly, the online format may have boosted attendance as participants were able to join from a location of their choosing. This format also made it easier for participants to attend a smaller part of the workshop if they were unable to attend for the full time.

The pandemic also provided new reasons for which participants may want to engage with others in conversations of food access. Although work in this area is often done at the organization and institutional levels, the interpersonal relationships are key in strengthening

work at those higher levels. In the words of one workshop participant:

> *"In the immediate aftermath of the COVID-19 pandemic, my role as a volunteer coordinator pivoted to ensuring food access for [City] Public School students in ways that I would never have foreseen. I would like to connect with other community members who have long participated in the food system and policy sector to determine where there are natural connection points and opportunities for partnership."*

Another stated that they hoped to gain a *"[b]etter understanding about how I can be [a] useful person for organizations and people during complicated times and when people are looking for resources."*

However, we also noticed that some individuals who initially expressed interest in participating were unable to do so due to unexpected issues that arose due to the pandemic. For example, many working in nonprofit and government agencies saw an increase in demand for their services (e.g. food banks and social services). Because of this, the need to serve their constituents was understandably greater than their ability to attend the workshop.

Impacts by the pandemic on community partnerships were similar to impacts on the workshop. In some cases, interested community individuals and organizations were unable to fully engage in this work as their attention was turned to meeting increased food needs caused by the pandemic. In other cases, individuals and organizations saw needs evolve during the pandemic. For example, data collection needs increased as additional information was needed regarding areas that were seeing a higher need for food as a result of increased unemployment. As a result, partnerships had to remain flexible so that changing needs could be quickly met.

The pandemic also highlighted the importance of equity in food access. While equity has always been an important part of the food access puzzle, health, economic, and racial disparities

were exacerbated by the pandemic. In addition, food-providing organizations were negatively impacted by a decrease in support while demand was increasing. As one participant stated:

> *"[The organization] and the volunteer base had trouble because it either wasn't deemed an essential service or had to run on a very low number of volunteers."*

Another described a similar issue, noting that "*[The organization] had issues with prep + food delivery because there weren't enough people."*

Those relying on organizations also saw challenges presented by the pandemic. As services continued to be moved to a delivery format, and as contact was increasingly made online, those with no or with limited internet access had trouble accessing the services they needed:

> *"The rush to make food accessible blocked out a lot of people. Even though these people weren't in a physical location of a food desert, this was enough to isolate people...into artificial food deserts."*

There were also differences in what various groups deemed to be "essential" services. While some food sources, such as grocery stores, remained open, others were shut. One participant described the impact of deeming local farmers markets as non-essential:

> *"When everything shut down the first time, the local farmers markets were declared 'non-essential', so a lot of people that relied on those markets for fresh produce had issues."*

In addition to the challenges described above, the pandemic also led to barriers in collaboration and engagement. These, along with other barriers, are discussed in the following section.

Perceptions of the university

Participants internal and external to the university discussed the role of the university in building collaboration and in community engagement, with one participant stating that the university was "not very good in this regard." In one instance, a member of the community noted how other groups of researchers from the university had engaged the community in their work, but later seemed to disappear. In those cases, it seemed as if the researchers used the community to further their work, but did not give back. It also seemed as if interpersonal connections were built only to gather data, not because the relationship itself was valued.

Similarly, another participant discussed how the university seemed to be taking credit for ideas that had come from within the community:

> *"One thing that universities did was taking credit for the idea that was originally from inside the community. I would suggest giving proper credits to the individuals who give interesting ideas."*

Again, community members felt that the university was taking from the community without providing something in return.

In another instance, a participant discussed ways in which student projects with food banks turned out to be unhelpful. The student's supervisors encouraged the student *"not to hesitate to make a wrong decision,"* treating the food bank as a practice area rather than an organization that had a real impact on the lives of individuals.

From the perspective of Arnstein (1969), many participants' comments underscore the difficulty for a transdisciplinary research team based in a university to work towards a more equitable food system. While Arnstein's conceptualization focuses on interactions between citizens and governments, we see parallels in our team's work with organizations and individual

citizens about food system issues. This begs the question of how such a team might more effectively increase their level of participation vis-a-via Arnstein's ladder; what would achieving true "Partnership" or even "Delegated Power" require?

This question is something that the research team will continue to grapple with as we continue to develop our work. However, some rhetorical questions seem apparent to us as of the writing of this perspective. True "Partnership", according to Arnstein (1969) requires shared decision making between communities and powerholders. Such power sharing likely requires a compensation structure for participants, or their employing organizations, to justify the time required to fully engage in the work. Structuring that compensation into a research team's efforts might be difficult, but in theory not impossible. Further, collective decision making would mean that aligned organizations and interested communities would have tangible influence on the research team's agenda and work; beyond the extractive data gathering criticized by several of the respondents. How would such a shared governance system function, especially in light of decision making made by university officials beyond the scope of the research team, is something that we actively tackle by including organizations and communities from the ground floor in *a priori* research and not in *a posteriori* reporting only.

Conclusion

From individuals to organizations to communities, all can play a key role in working to promote food access. Though there are many players in this work, there are also many opportunities. By working to build successful collaborations, and by seeking to engage with members of the community, food access advocates can identify efficient solutions, and create plans and policies that are equitable for all.

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Environmental nonprofits and Institutional diversity: An Analysis of diversity practices, demographics, and implications for sustainability

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Abstract

Institutional diversity is recognized to be an essential organizational capacity for improving organizational success and sustainability. In the same light, environmental organizations have been recognized for using organizational capacities to enhance human and environmental health and advance sustainability by typically looking for the unmet needs and leveraging their resources to meet such needs in different and diverse vulnerable communities. This qualitative study examines the level of institutional diversity practices in Virginia's environmental nonprofits' board and staff composition, using Virginia's nonprofits as a case study. The study adopts community engagement/representation and resource dependency theory to explain the importance of improving environmental nonprofits' board and staff diversity demographics. Also, a secondary data collection strategy and a coding analysis were used to collect and analyze the racial and gender diversity demographics of 82 Virginia land conservation environmental organizations, as reported on eco.usa website and on GuideStar official website. The research analyzes the gender and racial composition of these organizations' board of directors and staff members, as provided on GuideStar. The study also examined the percentage of data of racial and gender representation of the board of directors and staff and board diversity practices to examine the level of institutional diversity in environmental nonprofits. The study found a low level of diversity practices and diversity demographics in the racial representation of Virginia environmental nonprofits.

Keywords: Institutional (gender, race) diversity, community engagement theory, diversity demographics, environmental nonprofits, sustainability

Environmental nonprofits and Institutional diversity: An Analysis of diversity practices, demographics, and implications for sustainability

Institutional diversity has been recognized in the literature as a crucial strategy for enhancing organizational success and sustainability. In the same vein, one of the success components of environmental organizations around the world today has been found to hinge on their abilities to enhance environmental health and sustainability (Bortree; 2009; Pelling, 2010; Bromley, 2017; Ritcher; 2018; Robinson, Shum, & Singh, 2018; Taylor et al, 2019). Environmental organizations in the United States are increasingly striving to enhance how they obtain and use their resources. Subsequently, they try to build on existing organizational strategies or devise new ones to improve their opportunities and relevance in the environments they reside and reach out to, respectively. Their goals are to positively impact the public by providing services that promote environmental wellness and collaborate with government parastatals and other agencies to do the same Ritcher; 2018; Robinson, Shum, & Singh, 2018).

Environmental nonprofits are defined as environmental organizations that enhance environmental health and advance its sustainability by typically looking for unmet environmental needs in vulnerable communities and take time and resources to attend to the needs of such communities (Robinson, Shum, & Singh, 2018). Nonetheless, diverse individuals and groups advocating for environmental justice and sustainability argued some of the causes of environmental deficiencies to include discriminatory zoning, low diversity demographics and inclusion practices in environmental organizations, segregation in emergency preparedness, and poor response mechanics to sea level rise outbursts (Ritcher; 2018; Robinson, Shum, & Singh, 2018; Taylor et al, 2019). Studies show that restructuring practices and programs in environmental nonprofits will provide solutions to dealing with these existing deficiencies

(Landphair, 2007; Ritcher; 2018; Robinson, Shum, & Singh, 2018; Taylor et al, 2019). For instance, Taylor et al (2019), in their study, found that the promotion of diversity in environmental organizations has a higher effect on improving their efficacy and success in the environments they serve.

The purpose of this study is to examine the level of institutional (gender and race) diversity demographics and practices in Virginia's environmental nonprofits' board and staff composition, using Virginia's environmental organizations as a case study. Studies have shown that workplace diversity poses a vital resource for the sustainability of every organization and has become a social responsibility requirement in the United States and many parts of the world. Hence, the core purpose of the study is to examine how diverse these demographics are in terms of gender and race since diversities will help environmental nonprofits be more effective in representing and engaging the diverse populations and communities they aim to serve.

The study adopts the community engagement/representation theory and resource dependency theory to explain the importance of improving environmental nonprofits' board and staff diversity demographics. This research paper examines the state of functional diversity and inclusion practices in Virginia's environmental nonprofits workforce composition, using Virginia environmental nonprofits as a case study. The study achieves this by looking through the racial and gender representation of the board of directors and staff provided on GuideStar. Since environmental nonprofit organizations are important actors in enhancing and advocating for coastal sustainability, the study explores and analyzes their diversity and inclusion incorporation status in terms of organizational demographics as it has been considered as a driver in enhancing coastal resilience (Weisinger, Borges-Méndez, & Milofsky, 2016; Robinson, Shum, & Singh, 2018, Taylor et al., 2019).

Significance of Study

Many environmental organizations are actively involved in land and coastal conservancy to maintain shorelines, green environment, and trails. Research has shown that sixty-five percent of the world's urban population lives in coastal areas, and by 2025, almost three-fourths are expected in such areas (Keen & Pullin, 2011). To this end, there is a need to establish, improve and domesticate ways environmental nonprofits assist communities to become more sustainable. Recent studies have shown that improvements in the domestication of diversity and inclusion practices will ameliorate environmental deficiencies, such as discriminatory zoning and low diversity demographics and inclusion practices in environmental organizations, and help environmental nonprofits become more flexible in their responses to diverse communities' environmental needs. Similarly, environmental nonprofits are generally more effective in their service delivery, which implies they get better chances in enhancing sustainability in vulnerable communities when there is an informed presence and increasing operationalization of diversity and inclusion practices (Taylor, Paul, & McCoy, 2019).

Theoretical Framework: Community Engagement/Representation and Resource Dependency Theories and Relevance

Two theories are adopted for this research to contextualize the importance of institutional diversity and enhanced diversity representation in every organization, more specifically, environmental organizations. These theories include the community engagement/representation and resource dependency theories. They are discussed below both broadly and particularly in the context of environmental organizations and institutional diversity.

Community Engagement/Representation Theory

Community engagement/representation is the "process of working collaboratively with and through groups of people affiliated by geographic proximity, special interest, or similar situations to address issues affecting the well-being of those people. It is a powerful vehicle for bringing about environmental and behavioral changes that will improve the community's health and its members. It often involves partnerships and coalitions that help mobilize resources and influence systems, changes relationships among partners, and serve as catalysts for changing policies, programs, and practices" (CDC, 1997, p 9). In his study on partnerships,

Staley (2009) reviewed the literature on community engagement/representation theory and identified seven relevant component areas where community engagement has positively impacted when introduced in organizational activities (Staley, 2009). These areas are summarized to include: Agenda setting to fit community and organizational needs; Improvements in organizational design, delivery and speed, and efficiency of projects by engaging partners and participants; implementation and capacity for change and the maintenance of long-term partnerships can be expanded; Representation that creates processes for resolving ethical problems and improving opportunities for consent, public involvement; Organizational partners such as academics gain more understanding, new insights on the issue under study and appreciates the role and value of community involvement, including opportunities to disseminate results for broader use; Organizations gain knowledge through knowing more about the higher profile in a community, get more linkages and affiliations with different and diverse community members and entities, hereby gaining trust, resources and new organizational capacity; and lastly, the general public is likely to be more receptive when directly or indirectly represented or engaged (Staley, 2009).

The community engagement/representation theory and these component benefits in the context of environmental organizations explain the importance for environmental nonprofits, as community organizations, to represent the environment that they serve or aim to serve. This will be beneficial to them by helping them be more effective in discovering, communicating with and meeting the needs of the communities they serve (Staley, 2009). This goal for environmental nonprofits is mainly to recruit and retain a more diverse workforce (board and staff) drawn from such communities. According to the community representation theory, this will help to build trust, enlist new resources and allies, create better communication, and improve overall environmental outcomes as successful projects evolve into lasting sustainability in the part of environmental nonprofits (CDC, 1997; Shore, 2006; Stanley, 2009).

Resource Dependency Theory

The study adopts the "Resource dependency" theory propounded by Pfeffer and Salancik to explain the importance of improving environmental nonprofit organizations' board and staff members related to its diversity demographics. Resource dependency theory generally considers an organization's resources as vital for attaining its set goals (Pfeffer & Salancik, 1978). Hillman & Dalziel (2003) affirmed the notions of board capital and staff capital to include human capital such as expertise, experience, reputation, and relational capital such as networks and linkages to external constituencies.

In the case of these kinds of capital, the resource dependency theory operationally considers environmental nonprofits' boards and staff as vital human resources to organizations in general. For example, the resource dependency theory investigates how board members provide connections to influential funders (both private and public funders) for an organization, bring technical competencies (such as financial, legal) to the organization, as well as provide strategic

direction for the organization (Herman & Renz, 2000; Brown, 2005). Through these acts, the board is adding value to the organization by bringing resources, in addition to their primary goal of performing monitoring and control functions (Buse, 2016; Taylor et al., 2019).

Research Questions

The study explored one main research question with two sub-questions.

i. What is the level of institutional diversity demographics and practices in Virginia land conservation environmental nonprofits?

ii. What is the level of institutional diversity in Virginia land conservation environmental nonprofits' board and staff demographics?

iii. What is the level of institutional diversity in Virginia land conservation environmental nonprofits' board practices and leadership?

Literature Review

Different definitions of institutional diversity exist. Some authors have defined diversity based on any attribute people use to tell themselves that another person is different (Williams & O'Reilly, 1998; Jackson, 1992; Mannix et al., 2005). Loden & Rosener (1991) have also defined diversity as that which differentiates one group of people from another along with the primary (race, age, gender e.t.c.) and secondary dimensions (education, religion, political orientation). Herring (2009) irrefutably opined that "diversity" generally refers to policies and practices that seek to include people who are considered, in some way, different and have diverging characteristics. More centrally, diversity aims to create an engagement culture that values and uses the talents of all would-be members.

By these various definitions of diversity, it is evident that diversity transcends beyond 'race' and 'gender' (which is the aspect focused on in this study) but include all types of individual

differences, such as gender, ethnicity, age, religion, disability status, geographic location, personality, sexual preferences, and a myriad of other personal, demographic, and organizational characteristics (Herring, 2009:209). Diversity can thus be an all-inclusive term that integrates people from many different taxonomies. Considerably, diversity issues are now considered imperative and are projected to become even more significant in the future due to cumulative differences in the population of many countries, which transcends into organizations there (Mazur, 2010).

Delving more on diversity as a conceptual framework, Mannix & Neale (2005) have contributed significantly to the diversity scholarship. According to them, diversity has two disparate situations; the Visible and Non-Visible differences in individuals' characteristics. Suffice it to say that visible differences include ethnicity, race, age, disabilities, and gender. Their study explores the visible difference of gender and race representation and its importance on the sustainability of environmental nonprofits.

Institutional diversity from gender and race perspectives

Gender and racial diversity are two other kinds of institutional diversity (age, tenure, disabilities) that inform the recognition of different kinds of surface-level characteristics or visible differences in the organization's demographics, including their board and staff composition (Mannix & Neale, 2005).

On the one hand, promoting gender diversity in organizations can be defined as equal recognition, protection, and encouragement of surface-level characteristics that differentiate the male from the female. Studies trends have shown that women are underrepresented in the upper strata of environmental institutions, especially the board positions (Mannix & Neale, 2005; Taylor et al., 2019). For instance, in 2014, Taylor collected data on the leadership of 324

environmental nonprofits and found that only 28.3% of the organizations had a female president, 35.8% had females on their boards, and 30.6% had female board chairs (Taylor et al., 2019).

Racial diversity, on the other hand, has been opined by Carbado and Gulati, (2003) as "conveying the idea that a relationship exists between race and social experiences, on the one hand, and embracing the knowledge and practices of the idea on the other hand" (Carbado & Gulati, 2003, p. 1153). Central to racial diversity is how experiences, compositions, and composure of individuals in the society are shaped (Cox & Nkomo, 1991; Carbado & Gulati, 2003; Mannix & Neale, 2005). In this light seven functions of diversity: (1) inclusion; (2) social meaning; (3) citizenship; (4) belonging; (5) color blindness; (6) speech; and (7) institutional culture. The authors submitted that each function is derived from the "relationship between race, and social experiences" amongst individuals (Carbado & Gulati, 2003). This study concentrates on the "institutional culture" function of diversity in organizations, as evident in the board and staff composition and its implication on organizational sustainability.

Who are environmental nonprofits?

Environmental nonprofits are organizations that enhance environmental adaptation and sustainability by typically looking for unmet environmental needs of communities and individuals and commit resources to help address these environmental issues that concern the public (Sadler, & Champney, 2016; Hanna-Attisha et al., 2016; Robinson, Shum, & Singh, 2018). Explanations for environmental nonprofits in advancing adaptation and sustainability generally fall into three main categories namely, economic, political (Young, 1999; Steinberg, 2006; Suárez, 2009; Smith & Gronbjerg, 2006), and environmental (Lee; 2002; Downey; 2006; Francis, 2017; Merriman-Goldring, 2017; Robinson, Shum, & Singh, 2018). While these categories are divergent and attend to separate issues, they are not mutually exclusive but

somewhat interconnected. Environmental nonprofits emerge in this light to serve groups or populations that are not covered adequately or sufficiently by the government's services. This occurs primarily because of the public sector's limited access or attention to addressing environmental issues in diverse communities in need (Suárez, 2009).

Though U.S. environmental organizations have existed for nearly a century (Taylor et al., 2019), by 2014 their number has doubled to over 20,000 environmentally-focused nonprofits operating in the United States (Guidestar, 2014; Guidestar, 2020). These nonprofit organizations are considered visible sub-sector in their contribution to sustainability and resilience and known to receive both government and private funds to promote their service delivery (Bortree & Seltzer, 2009; Lu, 2016).

However, research has shown that the growing variety and intensity of change and its dynamism in the contemporary organizational environment have led to the increasing importance of agility as a medium to adapt to internal and external threats and opportunities that organizations experience in their product and service delivery endeavor (Landphair, 2007; Taylor et al., 2019). Ways to level up with these dynamisms involve agile values that include individuals and interactions, novel and practicable ideas, and increased collaboration with the organizational environments (Qumer & Henderson-Sellers, 2008). Strategic agility offers organizations like environmental nonprofits the opportunity to be flexible, open, adaptive, and responsive to alternations and implement actions to control changes, improving effectiveness and longevity (Serrador, & Pinto; 2015).

Institutional diversity: an agile strategy for environmental nonprofits' enhancement of social responsibility and environmental sustainability.

The pivotal role that environmental nonprofits play in advancing environmental components is of growing interest to academics and practitioners (Velez & McCartha, 2019). Environmental nonprofits deal with issues of environmental sustainability in diverse communities and the preparation of these nonprofits to facilitate their response and effectiveness level is of high salience (Taylor et al., 2019). Research has shown that proactive and " agile" environment nonprofits have a higher tendency to restructure their practices and programs to facilitate effective service strategically and resource provisions for their mission-based goals, compared to those that are not (Weisinger, Borges-Méndez, & Milofsky, 2016; Ahammad, Glaister, & Gomes, 2019). Agility, in this study, operationally informs environmental nonprofits' ability to flexibly adapt relevant ongoing trends and values, identify developments, predict their potential impact on the environment, and quickly learn how to implement changes to their standard operating culture and practices (Weisinger, Borges-Méndez, & Milofsky, 2016; Ahammad, Glaister, & Gomes, 2019).

Considering the institutional diversity principles as an agile practice, this research operationally defines strategic agility as the proactive adoption of practical strategies, programs, and procedures that enhance diversity and inclusion in environmental nonprofit organizations*)* Weisinger, et al, 2016; Ahammad, Glaister, & Gomes, 2019). As a response to the categorization of diversity and inclusion as a strategic, agile practice, environmental nonprofits need to adopt this agile approaches as part of their structure redesigns, outreach management, responsibility in order effectively respond to diverse environmental needs, the secure long-term sustainability of their organization and also to uphold their organizational social responsibility duties (Ahammad, Glaister, & Gomes, 2019; Taylor et al., 2019).

An example of such agile systems focuses on the intentional and voluntary adoption of programs and practices that promote institutional diversity in environmental nonprofit organizations, both in the composition of their board and staff and the dispensation of their service. Recruitment strategies that facilitate an increase in the domestication or/and maintenance gender and racial diversity demographics of the organization's board and staff are one of such intentional practices (Taylor et al., 2019).

Methods of data collection and analysis

This is a qualitative research using a secondary data collection approach. The study collected data from a cross-sectional survey using a secondary data collection strategy. Information was extracted on racial and gender diversity demographics of the eighty-two (82) Virginia environmental nonprofits, as reported by eco.usa, on GuideStar U.S. official website. This extensive information service specializes in reporting U.S nonprofits information and has a database of over 2.5 million diverse kinds of nonprofits. The study analyzed the gender and racial demographics of board and staff and the diversity practices in board leadership provided on the GuideStar using a coding analysis of the data.

Coding analysis is a research technique for making replicable, and valid inferences from numbers, documents, or other meaningful matters, to the context of their use (Krippendorff, 2012). The study adopted coding analysis, using explicit terms, to examine data because it allows the researcher to classify numbers and texts from documents, interpret their meanings as relevant to the study and draw conclusions (Krippendorff, 2012; Schreier 2012).

The coding of the text was done by reading complex documents and pulling out relevant words or codes. Also, the hand-coding helped analyze the data meticulously and recognize errors easily (e.g. typos, misspelling), which would have been needful to re-check in the case of

software application usage, even though the latter is quicker. The validity of the coding process was ensured through a consistent and coherent coding procedure. In other words, board and staff diversity demographics and board diversity practices in the IRS documents showing racial reports were used as determinants for organizational and institutional diversity levels when coding for nonprofits examined in the study (Krippendorff, 2012; Creswell and Creswell, 2017).

Unit of analysis

The unit of analysis of the study is the land conservation "environmental nonprofit organizations" in Virginia. Typical to coding analysis, the study adopted a deductive approach of linking two concepts formerly discussed in the study literature, social responsibility, sustainability, and the research dependency theory in the discussion section, to converse the importance and implications of the findings.

Findings

The study extracted information on the racial and gender diversity demographics of (82) Virginia's environmental nonprofits, as reported in February 2020 by the Virginia Department of Conservation and Recreation, Eco USA website, and GuideStar U.S. official website. Out of the 82 environmental nonprofits examined, 17 organizations responded to the diversity practices in board leadership, and only 4 disclosed their diversity data at the demographics level. Three of the organizations that provided their diversity demographics did not respond to the board leadership practice question. This gave an overall of 20 responses (24.4%) out of 82. These responses answered the gender, racial, and board diversity practices questions. Some of the other organizations provided information retrievable on Guidestar, such as their tax information and their organization's functions. However, information regarding their diversity demographics was either not filled or tagged as "not applicable."

Summary Table 1:
Diversity demographics and practices -Gender, Race-board and staff-)

Board and Staff Gender Demographics			
Virginia Environmental Nonprofits	*Male(%)*	*Female (%)*	*Not reported (n=85)*
Board (n=4)	**47%**	**53%**	**95%**
Staff (n=4)	**33%**	**67%**	**95%**
Board Practices			
Virginia Environmental Nonprofits (N =85)	*Yes*	*No/Not applicable*	*Not reported*
Ensure diversity and inclusion in Board Leadership (Average %)	**9 (10.5%)**	**8 (9.4%)**	**68 (80%)**

Gender Diversity demographics/Board Diversity Practices in Virginia Land Conservation environmental Nonprofits
*Data extracted from "GuideStar" in partnership with CHANGE Philanthropy and Equity in the Center. "**Board and Staff members***

Summary Table 2:
Racial diversity demographics: Board and Staff members (Average)

Virginia Environmental Nonprofits	*African/African Americans*	*White*	*Multi-racial/Multi-ethnic*	*Hispanic*	*Asians/ Asian Americans*	*Native Americans*
Board Members (n=4)	**3.3%**	**83%**	**1.7%**	**4%**	**8%**	**0%**
Staff Members (n=4)	**1.3%**	**90.3%**	**2%**	**0.33%**	**1.7%**	**0%**

Racial Diversity demographics in Virginia Land Conservation environmental Nonprofits
*Data extracted from "GuideStar" in partnership with CHANGE Philanthropy and Equity in the Center. "**Board and Staff members***

The above and the appendix section tables show the diversity demographics and practices of the organizations that disclosed their institutional diversity data. The first table (*Table 1.)* shows a relatively positive trend for gender diversity, especially with women as board members in

environmental organizations. This shows a trend development, which is now inconsistent with the previous literature found that women are underrepresented in the upper strata of environmental institutions, especially the board positions (Taylor, 2019). It also shows that board diversity practices are an average based on the reported percentage of diversity in board practices and leadership at 10.5%. Nonetheless, *Table 2.* suggests that the racial diversity demographics for board members skew significantly towards the white ethnic group at 83%, and also suggests the racial diversity demographics for staff members skew significantly towards the white ethnic group, with the staff demographics showing the highest skewness level of approximately 90.3%. The response for the study is 20 (24.4%) responses out of the 82 Virginia land conservation environmental nonprofits.

The 2020 racial demographic profile in Norfolk, Hampton Roads, where many of Virginia environmental nonprofits operate, account for; White: 47.01%, African or African American: 41.58%, Multiracial: 4.29%, Asian: 3.69%, Other race: 2.95%, Native American: 0.41%, Native Hawaiian or Pacific Islander: 0.07% (World Population Review, 2020). The 2019 racial demography according to the United States Census Bureau for Hampton city consist; White alone: 41.2%, African or African American alone: 51.3%, American Indian and Alaska Native alone: 0.6%, Asian alone: 2.4%, Native Hawaiian and Other Pacific Islander alone: 0.2%, Multiracial: 4.3%, Hispanic or Latino: 6.2%. (U.S. Census Bureau, 2019).

On broader terms, the 2020 Virginia racial demographic profile also accounts for African/ African American: 19.17%s, White: 68.02%, Asian: 6.32%, Multiracial: 3.68%, Other race: 2.48%, Native American: 0.27%, and Native Hawaiian or Pacific Islander: 0.07% (World Population Review, 2020). These profiles are not commensurate to the racial diversity level in environmental organizations in Virginia because of the very diverse communities they serve.

Having a staff demographics of approximately 90% in the environmental organizations implies a low diversity level on the organizations.

Discussion and Implications of the study

The study examines the institutional diversity demographics (gender and racial diversity) of 4 environmental nonprofit organizations in Virginia, which covers large, medium, and small based environmental nonprofits. The study discusses the findings using a deductive approach of linking two concepts formerly discussed in the study literature (social responsibility and sustainability) in conversing the implications of the findings. The study also used the theoretical framework, resource dependence theory to analyze and discuss the findings.

Resource Dependency

Studies have shown that more diverse boards and staff have higher potentials and tendencies to connect an organization to influential funders, bring technical competencies (financial or legal) to the organization, and provide strategic direction for the organization (Brown, 2005). In the case of these kinds of capital, the resource dependency theory operationally considers environmental nonprofits' board and staff as vital human resources to organizations in general (Brown, 2005). Through these acts, the board is adding value to the organization by bringing resources, in addition to their primary goal of performing monitoring and control functions (Taylor et al., 2019).

The study findings by implication, show a positive trajectory of Virginia environmental nonprofits to attract these benefits to environmental organizations and the public by their gender diversity prowess. It is worthwhile to see that the organizations studied take gender diversity seriously, as shown in their gender diversity demographics. Research has also shown that the

higher the number of women on a corporate board, the higher the chance that the organization reports diversity data (Rao & Tilt, 2016).

Nonetheless, the findings suggest racial diversity in Virginia environmental organizations to be very low, spurred by the low racial diversity demographics and a large amount of non-disclosure of diversity data. Hence, since the resource dependency theory suggests that diverse boards and staff would attract more resources to an organization and that those resources will strengthen the organization's performance, Virginia land conservation environmental nonprofits leaders and managers need to improve on their domestication of racial diversity practices. Such diversity practices can include recruiting a more diverse pool of applicants, translating to a more racially diverse workforce (Rao & Tilt, 2016; Taylor et al., 2019).

Social responsibility

According to Taylor et al. (2019), diversity, equity, and inclusion are all forms of social responsibilities that enhance the sustainability of organizations. Environmental nonprofit organizations are not exempted. There is increased pressure on organizations to inform the public about social responsibility activities. Studies have also found that gender positively impacts the disclosure of social responsibility data (Dienes, & Velte, 2016; Rao & Tilt, 2016).

This implies that the higher the number of females in supervisory positions like boards, the higher the reporting rate of environmental and social responsibility data. This proves to be a helpful resource for researchers and practitioners in the field of public administration and the general sphere of the public in terms of the increased pool and access to secondary information about environmental nonprofits regarding their practices and culture (Dienes, & Velte, 2016; Taylor et al., 2019).

Sustainability

Another reason institutional diversity is important for environmental nonprofit organizations, especially for race diversity, which is a deficiency in the study findings, is linked to social and environmental sustainability. In the findings of Frey (2018), the United States is experiencing a demographic shift that will affect the racial composition of environmental nonprofits. The census conducted by the U.S. Census Bureau in 2018 also projects that racial/ethnic minorities will constitute most of the United States population by 2045 (U.S. Bureau, 2018). By implication, environmental organizations that intend to remain successful, sustainable, and influential will have to recruit, hire, and retain minorities in their workforce, especially organizations that want to hire talented individuals. More so, excluding racial/ethnic minorities from today's workforce implies that an organization is ignoring skills, talents, insights, and experiences in about 42% of the U.S. population (U.S. Census Bureau, 2018). Hence, if environmental nonprofit professionals want to thrive in their mission to protect the environment and enhance greater environmental and coastal sustainability, the engagement of a more racially diverse pool in meaningful ways is of increasing need (Frey, 2018; Taylor et al., 2019).

Conclusions and area for future research

Organizations worldwide are saddled with the responsibility to continually improve their responses to stakeholders' needs and make efforts to meet their expectations of availability and personalized access to services. In this light, environmental nonprofit organizations need to continually improve their service delivery strategies from time to time to serve vulnerable communities sustainably and more effectively. One identified way environmental nonprofits could achieve this, as found by Taylor et al. (2019), is through the adoption and practice of diversity, equity, and inclusion practices. These practices enhance social responsibility and

organizational sustainability, leading to proactiveness and goal attainment of environmental nonprofit organizations (Taylor et al., 2019). Since board and staff members are considered human resources for environmental organizations, as operationally depicted by the resource dependency theory in the literature section (Brown, 2005), such members' skills, abilities, influences, and overall quality are crucial.

The literature has shown that institutionally diverse board and staff members have higher innovation potential, increased awareness, and connections with vulnerable communities and nonprofit funders because of their wider exposure and experiences. Hence, institutional diversity needs to be taken more seriously by environmental nonprofit organizations and needs to be revealed from time to time to inform the general public and facilitate trends records for researchers and individuals willing to explore them (Frey, 2018; Taylor et al., 2019). It is rewarding to see that the study findings significantly improve gender diversity, especially the female gender demographics presence on environmental nonprofits' boards. Nonetheless, the racial diversity demographics suggest otherwise, which implies an area pivotal for concentration by Virginia land conservation environment nonprofit organizations.

The study has limitations regarding the number of environmental nonprofit organizations for study analysis and the generalizability of the findings. The study had access to 20 Virginia land conservation environmental nonprofits diversity data of the 82 environmental nonprofits information examined. The other environmental nonprofits did not reveal their diversity demographics and practices data. Another limitation is that the study findings, though replicable, may not be generalizable beyond its case study, Virginia land conservation environmental nonprofits.

Consequently, there is a crucial need for environmental nonprofits to begin to reveal their demographics data for researchers and practitioners to identify and follow their diversity trends, report these trends and give recommendations for improvement where the need arises. Also, such information can help develop strategies that will facilitate more widespread disclosure of diversity data in the future (Taylor et al., 2019).

These limitations also suggest the need to explore diversity programming priorities and disclosure of data because it gives explicit directions in describing the broader work assumed by the landscape of environmental nonprofit organizations that shape their physical environment and their responses to sustainability through the creation and implementation of mission facilitators such as the continued incorporation of diversity practices (Velez, & McCartha, 2019). Hence, an area for further research can be to explore factors responsible for the non-disclosure of diversity data by most Virginia environmental nonprofit organizations.

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Appendices

Appendix 1:

Institutional diversity demographics of Virginia land conservation environmental nonprofits

Table 1:
Gender diversity demographics

Environmental Nonprofits (N =4)	*Male (%) Board Members*	*Female (%) Board Members*	*Male (%) Staff*	*Female (%) Staff*
Capital Regional Land Conservancy	50%	50%	33%	67%
Chesapeake Bay Foundation	59%	41%	39%	61%
Friend of Dragon Run	38%	62%	-	-
The Nature Conservancy, Virginia Office	41%	59%	27%	73%
Average % of demographics	**47%**	**53%**	**33%**	**67%**

Gender Diversity demographics in Virginia Land Conservation environmental nonprofits
Data extracted from "GuideStar" website ****Male/Female***

Table 2:
Racial diversity demographics: Board members only

Environmental Nonprofits	*Black/African Americans*	*White*	*Multi-racial/Multi-ethnic*	*Hispanic*	*Asians/ Asian Americans*
Capital Regional Land Conservancy	0%	90%	0%	0%	10%
Chesapeake Bay Foundation	10%	86%	0%	3%	0%
Friend of Dragon Run	-	-	-	-	-
The Nature Conservancy, Virginia Office	0%	73%	5%	9%	14%

Average % of demographics	**3.3%**	**83%**	**1.7%**	**4%**	**8%**

Racial Diversity demographics in Virginia Land Conservation environmental nonprofits
*Data extracted from "GuideStar" website. ***Board members only***

Table 3:
Racial diversity demographics: Staff members only

Environmental Nonprofits	*Black/African Americans*	*White*	*Hispanic*	*Multi-racial/Multi-ethnic*	*Asians/ Asian Americans*
Capital Regional Land Conservancy	0%	100%	0%	0%	0%
Chesapeake Bay Foundation	3%	90%	0%	0%	2%
Friends of Dragon Run	-	-	-	-	-
The Nature Conservancy, Virginia Office	1%	81%	6%	1%	3%
Average % of demographics	**1.3%**	**90.3%**	**2%**	**0.33%**	**1.7%**

Racial Diversity demographics in Virginia Land Conservation environmental nonprofits
*Data extracted from "GuideStar" website. ***Staff members only***

Appendix 2:

Institutional diversity demographics of environmental nonprofits in Virginia

Virginia Environmental Nonprofits (Eco.usa.net).

1. Alliance for the Shenandoah Valley
2. Appalachian Mountain Advocates
3. Audubon Naturalist Society
4. Audubon Society of Northern Virginia
5. Blue Ridge Foothills Conservancy
6. Blue Ridge Land Conservancy
7. Cape Henry Audubon Society

8. Capital Region Land Conservancy
9. Citizens for a Better Eastern Shore
10. Central Virginia Land Conservancy
11. Chesapeake Bay Foundation
12. Chesapeake Climate Action Network
13. Clinch Coalition
14. Coastal Virginia Wildlife Observatory
15. Dan River Basin Association
16. EcoAction Arlingtonian
17. Elizabeth River Project
18. Environment Virginia
19. 500-Year Forest Foundation
20. Friends of Accotink Creek
21. Friends of Dragon Run
22. Friends of Dyke Marsh
23. Friends of First Landing State Park
24. Friends of Huntley Meadows Park
25. Friends of Mason Neck State Park
26. Friends of Norfolk's Environment
27. Friends of the Lower Appomattox River
28. Friends of the North Fork of the Shenandoah River
29. Friends of the Rappahannock
30. Friends of the Rivers of Virginia
31. Friends of the Rockfish Watershed
32. Friends of the Shenandoah River
33. Goose Creek Association
34. Green Fence Conservation Trust
35. Herndon Environmental Network
36. Historic Virginia Land Conservancy
37. James River Association
38. Keep Virginia Beautiful
39. Land Trust of Virginia
40. Loudon Wildlife Conservancy
41. Lynnhaven River Now
42. Nansemond River Preservation Alliance
43. Nature Conservancy of Virginia
44. New River Land Trust
45. Northern Neck Audubon Society
46. Northern Neck Land Conservancy
47. Northern Shenandoah Valley Audubon Society

48. Northern Virginia Bird Club
49. Northern Virginia Conservation Trust
50. Nature Foundation at Wintergreen
51. Old Dominion Land Conservancy
52. Piedmont Environmental Council
53. Potomac Appalachian Trail Club
54. Potomac Conservancy
55. Prince William Conservation Alliance
56. Rappahannock League for Environmental Protection
57. Raptor Conservancy of Virginia
58. Richmond Audubon Society
59. Rivanna Conservation Society
60. Rockbridge Area Conservation Council
61. Scenic Virginia
62. Sierra Club - Virginia Chapter
63. Southern Appalachian Mountain Stewards
64. Sustainable Loudon
65. Sweet Virginia
66. Upper Tennessee River Roundtable
67. Valley Conservation Council
68. Virginia Beach Audubon Society
69. Virginia Bluebird Society
70. Virginia Conservation Network
71. Virginia Eastern Shore Land Trust
72. Virginia League of Conservation Voters
73. Virginia Master Naturalists
74. Virginia Native Plant Society
75. Virginia Outdoors Foundation
76. Virginia Organized Industries for A Clean Environment
77. Virginia's United Land Trust
78. Virginia Society of Ornithology
79. Virginia Water Environment Association Inc.
80. Virginia Wilderness Committee
81. Washington Area Butterfly Club
82. Wild Virginia