



**A COHORT STUDY**

## The Effect of an Intentional Residential Community on the Reintegration of Veterans with a Traumatic Brain Injury and their Families

**Bastion is America's first intentional community for returning warriors and families that addresses a critical gap in the continuum of care for this population.**

**PREFACE**



Since 2000, the U.S. Department of Defense has identified nearly 460,000 diagnoses (Department of Defense, 2022) of traumatic brain injury (TBI) among military service members. The majority of these TBI diagnoses are classified as mild; notwithstanding, a history of TBI has been associated with secondary effects that increase morbidity and mortality risk (Howard, et al. 2022) among members of this cohort. TBI also adversely affects psychosocial health outcomes (Chin & Zeber, 2020) for these

veterans and their families. While progress has been made to identify interventions to improve hazard risk, the integrated operationalization of these interventions remains largely incomplete (Maas et al., 2017). Bastion was designed to function as a culturally appropriate and financially sustainable vehicle for this integration. This study evaluated the efficacy of Bastion as an integrative, non-clinical intervention through the delineation of psychosocial health outcomes for households living there over a five-year period.

## BACKGROUND

Advances in aeromedical evacuation and battlefield medicine have led to a proliferation of traumatic brain injuries (TBI) in modern warfare, leading to a substantial increase in the number of veterans needing rehabilitative care, sometimes for the rest of their lives. When Bastion was first conceived in 2012, the government reported that 265,962 U.S. troops who had deployed to Iraq and Afghanistan had been diagnosed with a TBI (CRS, 2012). In 2022, the U.S. Department of Defense identified nearly 460,000 diagnoses (Department of Defense, 2022) of traumatic brain injury (TBI) among military service members since the turn of the century.

TBI is caused by a penetrating wound or concussive blast to the brain that can result in losses to physical, cognitive, psychological, and psychosocial functionality. Most reported cases are mild and improve over time. However, more than one in three veterans living with a moderate or severe TBI continue to require supervision and assistance in the activities of daily living for a year or longer post-injury. (Bailey et al., 2017). This group requires a sophisticated delivery of coordinated medical and social services. Furthermore, their unique vulnerability to social isolation and poor health outcomes demands a higher level of community-based support in a predictable living environment.

Bastion addresses a gap in the continuum of care through a model for intentional neighboring (Eheart, 2019) pioneered by Brenda Eheart of Generations of Hope in Rantoul, Illinois. By activating the embedded potential of social capital inherent in neighborhoods, an intentional community such as Bastion can grow individual networks all the while driving a healthy recovery and reintegration into society.

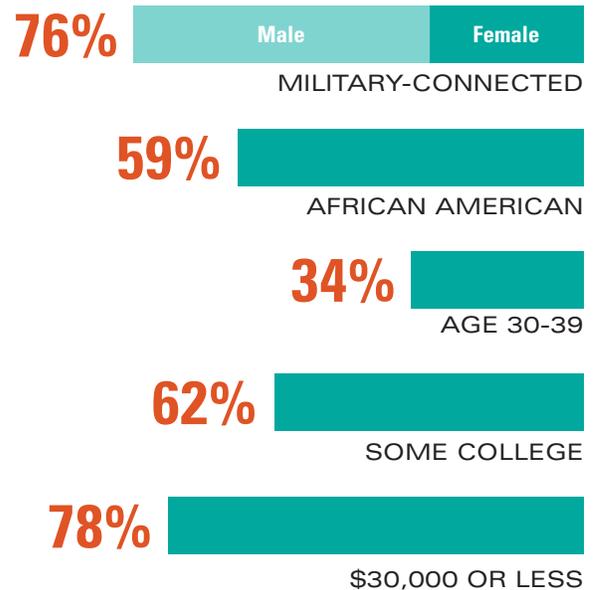
Studies have shown that not only do veterans frequently provide social support to other veterans, but the more social support they receive also increases their likelihood of providing that support in turn (Na et al., 2022). Bastion nurtures this dynamic by adapting Eheart's model for a military demographic and organizing its onsite team and services to address the unmet needs of military-connected families struggling with invisible wounds like TBI.

## HYPOTHESIS

If given the opportunity to live and serve in an intentional residential community, veterans and families will recover from life-altering injuries and reintegrate into society.

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## DEMOGRAPHICS



## METHODS

This cohort study evaluated mixed-methods data collected through a self-administered survey from residents of Bastion in New Orleans, Louisiana. Data was collected each year from 2017 to 2021.

### Sample

Among the 58 individual respondents, 76 percent identify as either a servicemember, veteran, or disabled veteran (military-connected, n=44), with 31 percent of the military-connected respondents identifying as female (n=14). Additionally, among the total respondents, 59 percent identified their race as African American (n=34). The total respondents' highest age range was 30-39 (n=20), and the second highest

range was 60 and older (n=16). 63 percent of respondents have an educational level of some college experience or lower (n=36), and 78 percent of all respondents made an annual income of \$30,000 or less.

### Variables

The measured variables in the survey were selected based on the desired outcomes of the intervention as reflected in the logic model. See Tables 1 and 2. In 2019 the Social Support Scale was added to the survey and changes were made to reflect updates to the RAND MOS scale, which changed from 20 questions to 36, as well as the PCL-M scale, which changed the response options from a 6-point scale (Strongly Disagree to

Strongly Agree) to a 5-point scale (Not at all to Extreme). By 2019 the survey included over 150 questions with 10 evaluation scales and a series of open-ended questions.

## DATA ANALYSIS

The study included three consecutive years of data run correlation tests in the Statistical Package for the Social Sciences to identify variables with statistically significant relationships. Using the Pearson correlation coefficient, significant correlations were consecutively identified from 2019 to 2021. There is a statistical relationship where respondents with a high resilience score also scored high for emotional wellbeing, for instance. See Table 3 for a complete list of correlations.

**TABLE 1. LOGIC MODEL**

INPUTS	STRATEGIES	ACTIVITIES OUTPUTS	SHORT OUTCOMES	MEDIUM OUTCOMES	LONG OUTCOMES
Value System	Intentional neighboring	Orientation Skill building Socials	Supportive network Culture of care and support		New paradigm
Material supports Benefits Affordable housing Healthcare	Person centered planning	Goal setting Coordination Wellness	Hope	Successful life course transitions  Vocational re-entry Community service Continued education Adapted and healthy lifestyle	Increased social capital
Site features Contiguous Wellness center Universal design Greenspace	Community based supports	Meals Peer support Transportation Recreation Respite	Purpose Connectedness Belonging		Added capacity for systems of social services
Residents Veterans and families Volunteer households	Property Management	Leasing Maintenance	Safety & security	Transformative gains  Recovery from trauma and loss Emotional growth Behavioral control Injury-specific improvements	Enhanced resilience and wellbeing  Veterans Older adults Families
Program staff	Professional partnerships	Behavioral Home health Complementary and alternative Brain injury	Proximal goals for households		

Based on the ICI model and the investigators' own research, certain elements of warrior reintegration were amalgamated into this logic model and spread over proximal, medial, and distal outcomes.

**TABLE 2. LIST OF MEASURED VARIABLES AND SCALES**

VARIABLE	SCALE
Connectedness	Social Connectedness and Social Assurance Scales. <i>Lee, R. M. &amp; Robbins, S.B., 1995</i>
Loneliness	UCLA Loneliness Scale. <i>Russell, D., Peplau, L. A., &amp; Cutrona, C.E., 1980</i>
Physical and mental health	RAND MOS: SF-20 and SF-36
Posttraumatic growth	PTGI-SF. <i>Cann et al., 2010</i>
Posttraumatic stress	PCL-M. <i>Weathers, F. W. et al., 1993</i>
Relationships	Inclusion of Others in Self (IOS) Scale. <i>Scale Gächter, S., Starmer, C., &amp; Tufano, F., 2015</i>
Resiliency	Brief Resilience Scale. <i>Smith, B. W. et al. 2008</i>
Safety	Guided response Yes/No scale
Self-Assessment areas of growth	Guided response Yes/No scale
Sense of hope	Adult HOPE Scale. <i>Snyder, C. R., 1991</i>
Social functioning and belonging	Social Support Scale with Appraisal, Belonging, and Tangible subscales. <i>Cohen, S. et al. 1985</i>
Socio-emotional well-being	Engagement in Meaningful Activities. <i>Eakman, A. M., 2012</i>

**TABLE 3. CORRELATION STATISTICS AMONG VARIABLES WITH STATISTICAL MEANING**

	Resilience is positively correlated with emotional wellbeing	Social functioning is positively correlated with emotional wellbeing	Loneliness is negatively correlated with emotional wellbeing	Loneliness is negatively correlated with perceived social support
<b>2019</b>	$r(14) = .74, p < .01$	$r(11) = .87, p < .01$	$r(13) = -.66, p < .05$	$r(09) = -.93, p < .01$
<b>2020</b>	$r(28) = .71, p < .01$	$r(28) = .78, p < .01$	$r(22) = -.71, p < .01$	$r(23) = -.79, p < .01$
<b>2021</b>	$r(28) = .63, p < .01$	$r(30) = .70, p < .01$	$r(26) = -.83, p < .01$	$r(23) = -.81, p < .01$

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**OUTCOME 1:** 99% of respondents feel safe living at Bastion

**OUTCOME 2:** 99% of respondents report positive growth

**OUTCOME 3:** Resilience peaked during COVID-19

**OUTCOME 4:** Wellbeing increased over time

**OUTCOME 5:** Loneliness decreased over time

**OUTCOME 6:** Wellbeing and loneliness are correlated with certain traits

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### DISCUSSION

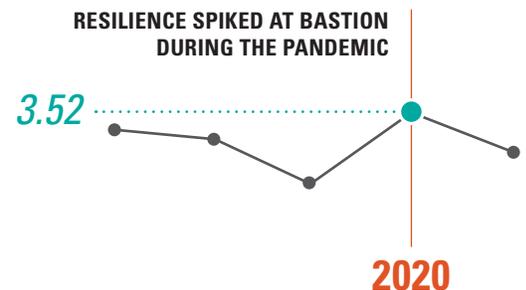
Respondents feel safe living at Bastion (Outcome #1). Residents have remarked that a sense of safety is not characteristic of many New Orleans neighborhoods, but that they feel like their children can play outdoors at Bastion without concern about neighborhood violence. This is notable because while low-income populations tend to experience higher rates of violent crime (HUD, 2016) and Bastion's community is predominantly low-income, other factors within the community appear to mitigate these effects.

Respondents also reported a high level of social connectedness throughout the study period. This could partially be the result of Bastion's physical layout, which was designed to maximize neighbor-to-neighbor interactions. Whether or not safety is related to the ability of respondents to form close social bonds with their neighbors, researchers believe the physical environment plays an important role in both.

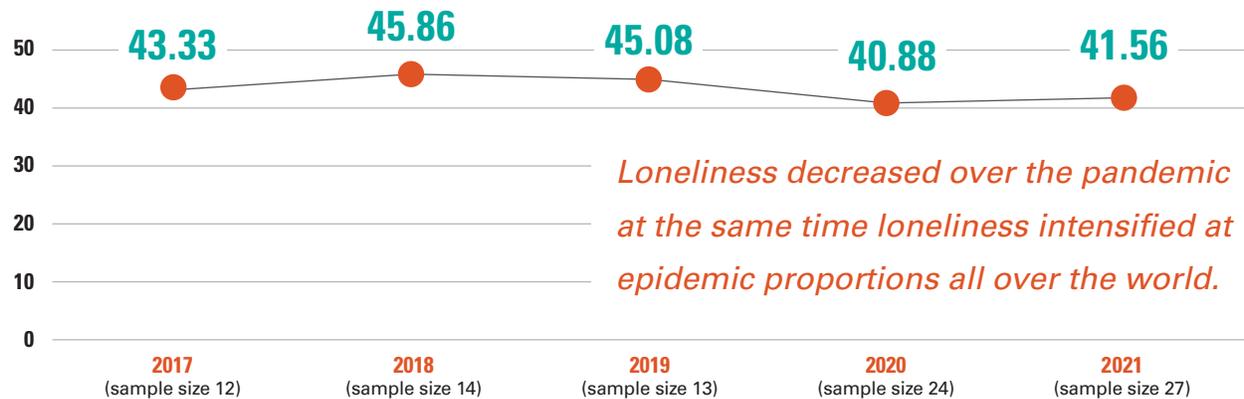
Respondents are making successful life course transitions as evidenced through several self-assessed areas of growth. Respondents are reporting increases in positive growth (Outcome #2) including career advancement, new friendships, getting connected to services, feeling connected to the community, providing service to the community, and practicing healthier habits. This outcome corresponds with what investigators observed over the study period.

Although resilience scores fluctuated within the normal range during the study, resilience was highest at the end of 2020 during the pandemic (Outcome #3). This is noteworthy given that U.S. households earning less than \$50,000 annually were more likely than their respective counterparts to have a low resilience score (American Psychological Association, 2021). Resilience could have peaked in 2020 due to perceptions of increased tangible support and appraisal at Bastion, as indicated by the Social Support Scale

and later vocalized in a focus group conducted in 2022. This is consistent with a model of resilience developed by Pauline Boss (Boss, 2006).



## LONELINESS SCORE MEANS



Potential range is between 20-80 where higher scores reflect a higher sense of loneliness

Respondents report increases in wellbeing over time (Outcome #4) as indicated by emotional wellbeing, social functioning, and social support. Average scores from the RAND MOS SF-36 scale measuring emotional wellbeing and social functioning jumped dramatically— 20 and 30 points, respectively, from 2019 to 2021, edging close to the scale’s central tendency mean. At the same time, respondents reported decreases in loneliness (Outcome #5) from 2018 to 2021, during a period when loneliness is reported to have intensified at epidemic proportions across the U.S. (Weissbourd et al., 2021).

Finally, higher resilience, higher social functioning, and lower loneliness levels (Outcome #6) are correlated with higher levels of emotional wellbeing. Lower levels of loneliness are also correlated with higher perceptions of social support. While correlation does not prove causality, these results affirm the positive effect of intentional neighboring in this population.

## CONCLUSION

The results of this study suggest that peer networks, social support, connectedness, and appraisal, or social capital more broadly, can improve health and wellbeing in a predominantly disabled community. They may even serve as protective factors for suicide which occur at a rate 1.5 times higher for veterans than among the general population (VA, 2019), and more research should be conducted at Bastion to assess these relationships.

When Bastion was conceptualized in 2012, successful community reintegration was the overarching goal of transition programs sponsored by the Departments of Defense and Veterans Affairs. Fulfilling that goal was the basis for Bastion as well. Based on the outcomes of this study, there is evidence of successful reintegration occurring at Bastion across short, medium, and long-term outcomes. Bastion’s unique but highly replicable model of intervention is working as intended and could serve as the template for future intentional communities that address critical needs among the veteran community.

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**DYLAN TÊTE**  
Founder

Upon his return from Iraq as an Army Captain, Dylan Tête wanted to create a safe, high-performing environment to heal and grow with his comrades. Having observed many of his friends return home and reintegrate into a society that was unequipped to maintain their wellbeing, Dylan spent five years learning restorative approaches and developing an intervention. The result was Bastion Community of Resilience, an intentional community of 58 apartment homes scattered on a five-acre campus located in New Orleans, Louisiana. Dylan is the recipient of the George W. Bush Military Service Citation and a Marshall Memorial Fellow. He accompanied First Lady Michelle Obama as a U.S. Presidential Delegate to the Invictus Games and introduced Mrs. Obama when New Orleans functionally ended veteran homelessness. Dylan is developing the strategy to build more Bastion communities in strategic locations throughout the U.S.

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**SPECIAL THANKS TO**



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