Crossings: Journal of Migration & Culture Volume 14 Number 2

© 2023 Intellect Ltd Article. English language. https://doi.org/10.1386/cjmc 00084 1 Published Online January 2024

SHEILLA R. MADERA

Florida International University

MARK PADILLA

Florida International University

NELSON VARAS-DÍAZ

Florida International University

ALÍXIDA RAMOS-PIBERNUS

Ponce Health Sciences

University

YOYMAR GONZÁLEZ-FONT

Ponce Health Sciences

University

ADRIÁN SANTIAGO-SANTIAGO

Ponce Health Sciences

University

JOHN VERTOVEC

Florida International University

ARMANDO MATIZ-REYES

Florida International University

KARIELA RIVERA-BUSTELO

Florida International University

CLAUDIA MERCADO-RÍOS

Ponce Health Sciences

University

IOSHUA RIVERA-CUSTODIO

Ponce Health Sciences

University

KEVIN GROVE

Florida International University

On staying: Non-migration among Puerto Rican physicians

ABSTRACT **KEYWORDS**

Since 2000, an exodus of Puerto Ricans leaving the island has reduced the local population by almost 20 per cent. One of the migratory waves of greatest concern is that of physicians due to its potential impact on Puerto Rico's (PR) public culture Puerto Rico place attachment

healthcare system public health qualitative interviews health. Strategies to curtail their migration have overlooked the island's unique cultural and geographic strengths that could encourage physicians to stay. This article, influenced by place attachment theory, explores the perspectives of physicians who have chosen to stay in PR. The presented data stems from qualitative interviews with 24 physicians. The findings underscore how place attachment, including an appreciation for PR's geography and culture, influences their decision to stay. We discuss how it is crucial to integrate place attachment into any comprehensive strategy to retain physicians on the island, as it becomes an intrinsic part of their identities and lifestyles. Thus, emphasis should be placed on the environmental and social benefits of remaining in PR, not solely economic factors.

- 1. This is an extract of a reggaeton song that was written in Spanish. The word cabrón, which is part of the popular jargon, was not translated since in PR it has a dual connotation: something that is extremely good, or something that is awfully bad or wrong. In this context, the use of the word precisely adverts the fact that very positive and extremely difficult aspects materialize simultaneously on the island
- 2 This mention of important names corresponds, respectively, to internationally recognized Puerto Rican salsa and rap singers, and a professional basketball player.
- 3. Perreo is a style of dance associated with reggaeton that emerged in the late 1980s in PR.
- 4. It refers to people from the US mainland who are moving to the island and buying properties, displacing the locals.
- 5. Estadounidenses refer to US citizens born on the US mainland. The word American is not used because it implies people who were born in the Americas, not specifically the United States.

Puerto Rico's fuckin' cabrón¹, hey, fuckin' cabrón [...] From Carolina came reggaetón [...] Land of Maelo and Tego Calderón And of Barea², who was a champion before LeBron, mmm Damn, another blackout [...] Here, the heat is different; the sun is Taíno, hey The capital of perreo³, now everyone wants to be Latino, no, hey But they lack sazón, batería, and reggaetón hey, hey, hey [...] I don't want to leave this place I don't want to leave this place I want them to leave⁴ [...] What belongs to me, they keep. I want them to leave. This is my beach; this is my sun This is my land; this is me.

(Bad Bunny 2022)

INTRODUCTION

The song 'El Apagón' ('The Blackout') by the Puerto Rican rapper Benito A. Martínez Ocasio (aka Bad Bunny), excerpted above, has travelled the world due to the stratospheric fame of this artist. It is a useful point of entrée to this article, which addresses the intersection between culture, migration and place attachment in the context of Puerto Rico (PR). The lyrics allude to the complex contrasting reality of the island. On the one hand, its beautiful geography, enviable climate and rich pan-Latin culture that has gained a global reach out of proportion to its size. On the other hand, the disturbing gentrification practices of the estadounidenses⁵ on the island, the rampant deterioration of its infrastructure that in recent years manifests itself in almost daily blackouts, and the everlasting reflection on migration as a way to escape the challenges inherent to life in PR. In short, the song simultaneously captures a plethora of elements associated with *puertorriqueñidad* ('Puertoricanness') and the conundrum faced by many Puerto Ricans who have to decide whether to stay or leave the island.

Since 2000, a massive exodus of Puerto Ricans from the island has reduced the local population by almost 20 per cent (Ayala 2021). However, one of the migratory waves of greatest concern due to its implications for the public health of PR is the flight of the health workforce. The PR Health Department recently announced that 50 per cent of physicians had left the island since 2009 in search of better opportunities and living conditions (NimB 2022).

While attention often centres on doctors leaving for the US mainland there is much fervour in the Puerto Rican and international media about the doctors who have left (Graulau Español 2022; NimB 2022; Telemundo PR 2022) - this article shifts its focus to those who stay. It is based on a study documenting why certain physicians opt to stay in PR despite difficulties. We aim to offer insights and strategies for encouraging physicians to continue practising on the island.

HISTORICAL, POLITICAL, ECONOMIC AND MIGRATORY **BACKGROUND OF PR**

The history of PR, a Caribbean island with a Spanish-speaking population of 3.1 million, is marked by colonialism (González 2020). Initially inhabited by the Taíno Indians, the Indigenous population was exterminated entirely with the arrival of the Spanish colonizers at the end of the fifteenth century (Varas-Díaz and Serrano-García 2003). After over 400 years as a Spanish colony, PR was ceded to the United States in 1898 through the Treaty of Paris, concluding the Spanish-American War (Ayala 2007). Since then, PR, often called 'the oldest colony in the world', has remained as an unincorporated territory, receiving unequal treatment in relation to the estadounidenses (González 2020). Despite being US citizens since 1917, Puerto Ricans lack full legal, political and cultural rights. The differentiation between the dominant culture in the United States and that of the island has produced a racialization of Puerto Ricans by the estadounidenses, which has led to the marginalization of the local population and their puertorriqueñidad by the dominant White Anglo-Saxon culture (Malavet 2004: 22).

In addition to racialization, the colonial situation has consistently attempted to suppress and control the evolution of local culture, a recurring theme in PR's history (Varas-Díaz and Serrano-García 2003). However, Puerto Ricans have been extraordinarily resistant, actively preserving their cultural identity throughout the colonial plight. The Taíno, Spanish, African⁶ and estadounidense presence has been woven into the complex Puerto Rican cultural fabric and is expressed in unique ways through its music (e.g. salsa, reggaetón), gastronomy (e.g. mofongo, alcapurria) and language (e.g. accent and pronunciation including the Puerto Rican 'r'7) (Santiago 2020). Indisputably, PR is a territory with an identifiable culture shaped by but fundamentally different from the dominating colonial power. As Malavet argued, PR'is a cultural nation that lacks sovereignty' (2004: 4).

One of the detrimental effects of PR's colonial status is evident in the economic sphere. The local economy has been set up as a captive market for US corporations, resulting in a 72-billion-dollar external debt (Morales 2019; Varas-Díaz et al. 2020). Most of the debt is now in the midst of perhaps the most extensive restructuring of public debt in US history (Austin 2022). The economic debacle is clearly reflected in the high poverty rates on the island (43.4 per cent) (Data USA 2020). The sustained financial crisis since 2006 has significantly affected PR's infrastructure, including the healthcare system (Varas-Díaz et al. 2020; Padilla et al. 2022). This fragile system, already weakened by economic neglect and 'vulture funds' that favour uncontrolled foreign investment, finally collapsed after Hurricane María in 2017, resulting in more than 3000 estimated excess deaths (Varas-Díaz et al. 2020). Many of these

- 6. In 1513 the Spanish authorities approved the traffic of Black slaves in their colonies. Between this date and 1553, about 1500 Black Africans were brought to PR.
- 7. Pronouncing 'l' instead of 'r' in syllable-final position is a trait of . Puerto Rican Spanish.

deaths were due to the interruption of life-sustaining treatments caused by the most prolonged blackout in US history (Rodríguez-Madera et al. 2021).

While this is the first systematic study on the migration of physicians from PR of which the authors are aware, journalistic accounts have pointed out that the constant failures in the electrical system (which have left hospitals without electricity, even during surgical procedures), problems with medical insurance reimbursements and low salaries compared to the United States are the most significant catalysts for physician migration in this context (Belluz 2017; Acevedo 2022; Begnaud 2022; González 2022; Graulau Español 2022). According to data from the PR College of Physicians and Surgeons, in the past years, the island has lost just over 14,000 specialists; only half of these providers remain to provide services to the population in need of specialized care (Respaut 2016). At the time this article was written, the government had convened a discussion table with physicians to develop strategies to address the impact of their migration (Telemundo PR 2022). None of the points under discussion to curtail the problem mentioned the strengths of the island context (e.g. cultural, geographic) that could motivate physicians to stay in PR and/or foster the return of those who have already migrated to the US mainland. All the proposed recommendations neglected to address what keeps individuals – in this case, physicians – attached to a specific geography or place.

THE PLACE ATTACHMENT FRAMEWORK

Place attachment is 'a positive affective bond between an individual and a specific place, the main characteristic of which is the tendency of the individual to maintain closeness to such a place' (Hidalgo and Hernández 2001: 274). Scannell and Gifford (2010) proposed a framework that includes three dimensions to explain a sense of attachment to a place: the person, the psychological process and the object of attachment. The first dimension (person) refers to whether the attachment is manifested at the individual or group level (e.g. when individuals or groups are attached to areas where they can engage in their preferred practices, including sports, music and religion) (Low 1992; Fried 2000; Scannell and Gifford 2010). The second dimension involves how individuals or groups relate to a place and the nature of the psychological interactions. It includes emotional (e.g. affective bonds such as love and pride), cognitive (memories, knowledge, meaning and beliefs) and behavioural aspects (proximity-maintaining actions) (Scannell and Gifford 2010). The third dimension alludes to the place itself. It has been examined at various geographic scales (e.g. a neighbourhood, a city) and has typically been divided into social and physical place attachment (Riger and Lavrakas 1981). Social place attachment refers to the fact that people are attached to places that facilitate social relationships (e.g. interaction with relatives) and group identity (Young and Willmott 1962). On the other hand, physical place attachment rests on the material features of the place, including neighbourhoods, buildings and natural environments (e.g. beaches, forests and mountains) (Manzo 2005).

Ultimately, place attachment is linked to the development of identity (in the case discussed here, puertorriqueñidad) to the extent that physical and symbolic attributes of specific locations contribute to an individual's sense of self (Proshansky 1978; Ramkissoon 2015; Boley et al. 2021). Further, the impact of change, or what has been called disruption to place attachment (Brown and Perkins 1992; Scannell and Gifford 2010), reveals how transformation in particular settings (ecological [e.g. floods] and human-induced changes [e.g. demolitions, new constructions, voluntary migration]) could result in emotional responses such as anxiety and loss (Fried 2000), and a sense of displacement that can lead to psychological trauma (Scannell and Gifford 2010). Place attachment can also have a functional aspect based on the ability of a place to satisfy an individual's recreational needs or enable goal achievement (Uiang and Zakariya 2015; Bolev et al. 2021).

The different dimensions linked to place attachment have been explored in studies on migration (Eacott and Sonn 2006; Rishbeth and Powell 2013; Pedersen 2018), especially for their significance at times when climate change (Dandy et al. 2019; Khanian et al. 2019) and political crises affecting certain regions (Hiruy 2009; van Liempt and Miellet 2021) could represent a risk for people who decide not to migrate (Huber and Nowotny 2020). Nevertheless, the literature on how place attachment could be a protective factor for the healthcare system by curtailing physician migration, for example, is scarce (Beccaria et al. 2021). We used this theoretical approach to understand why physicians decided not to migrate from PR to the US mainland.

METHODOLOGY

The data presented arise from an NIH-funded mixed-methods study (grant #1R01MD014188) aimed at documenting the factors associated with physician migration and its impact on PR's healthcare system. The research team used semi-structured qualitative interviews (SSOIs), brief surveys and institutional ethnographic observations as data collection techniques. This article focuses specifically on the data gathered from the SSQIs. Our qualitative inquiry was focused primarily on three questions:

- 1. How do physicians who have chosen to stay on the island describe their medical practice histories and the communities they serve?
- 2. What are their perspectives regarding life and medical practice on the island versus the mainland?
- 3. How do subjective experiences of attachment to the island and family shape physicians' decisions to migrate or stay in PR?

Fifty Puerto Rican physicians participated in the SSQIs (26 had migrated to the US mainland, and 24 remained in PR at the time of the interview). Due to the concern with understanding the perspectives of physicians who had stayed in PR, the research team focused this qualitative analysis on the interviews conducted with the latter group (i.e. non-migrants). All physicians who remained on the island were licensed in PR during the past decade and are currently providing medical services there. These 24 participants were between the ages of 26 and 67. The average annual income was \$147,167, based on self-reported income (range between \$30,000 to \$500,000). The sample was balanced in terms of gender and distributed evenly across the island, including both urban and rural areas. Our team intentionally diversified it to include the widest possible diversity of medical specialties.

Interviews were conducted between November 2020 and February 2021 and completed virtually due to the wide geographic spread of physicians and restrictions of the COVID-19 pandemic, particularly in clinical settings. Interviews were conducted in Spanish or English, depending on the participant's preference, and lasted between 30 minutes and one hour.

> To recruit participants, we contacted their office to explain the project and schedule interviews. We explored themes related to our theoretical interest in attachment to the island, including histories of their medical practice, populations and regions served, and narratives of decision-making regarding whether to migrate to the United States or stay in PR. We conducted sufficient interviews to ensure we captured the range of diversity in physician perspectives, and our analysis revealed that key concepts related to migration, practice context and attachment to the island reached theoretical saturation.

PHYSICIAN NARRATIVES OF ATTACHMENT AND MIGRATION

The migration of Puerto Rican physicians to the US mainland has been addressed on local/international news and social media (NimB 2022; Begnaud 2022). Therefore, it was not surprising that all participants were familiar with the subject and raised concerns about its implications for the health of the inhabitants of PR. Similarly, everyone acknowledged that the situation on the island was far from ideal in terms of opportunities for personal growth and better salaries. However, many other reasons for staying were readily provided, demonstrating that economic factors were only some of the issues involved. The analysis yielded five overarching thematic categories through which physicians explained why they decided to stay on the island: (1) geography and culture of PR; (2) emotional bonds to PR and family; (3) satisfaction with life in PR; (4) US culture as a deterrent to migration; and (5) commitment to PR and its people.

GEOGRAPHY AND CULTURE OF PR

PR's nickname is the *Island of Enchantment* due to its captivating and delightful geographic and topographical features (Drenth 2014). These physical properties of the Caribbean island attract international tourism and the locals who appreciate and value them. For this reason, many doctors highlighted PR's geographical attributes as fundamental elements for deciding not to migrate, clearly revealing this physical dimension of place attachment. For instance, one doctor attested to the feelings of connection and pride she feels for the island: There are so many things in Puerto Rico. I mean, starting with the weather, starting with the places, the beaches, the mountains. [...] Very humbly, I must say, you know, the Island is beautiful. The Island is gorgeous' (Female, 67 years old, integrative primary care).

Another participant shared how the geographic versatility and accessibility that characterize PR generated a sense of belonging:

I consider this to be my Island, my home. I have nothing to look for in the United States. One thinks of the alternatives or possibilities. [...] I don't have a specific place where I would like to go if I were to go. [...] I like the island as it is, you know, the geographical aspect, the fact that I can be in a rural area of the island in 30 minutes, and in those same 30 minutes, I can be on the beach. I love the versatility of this place.

(Male, 26 years old, psychiatry)

Beyond the geographic advantages of the island, the uniqueness of its culture was another notable factor in multiple accounts. The particularities of puertorriqueñidad differ markedly from the dominant culture of the United States (Molina Fumero and Barros Díaz 2019). This theme was reflected in verbalizations such as the following provided by a participant who emphasized that Puerto Ricans tend to connect and take an interest in the well-being of others:

We have always liked the culture; the culture is very different. [...] There is always the call, there is always a concern for one another, there is always sharing with one another, and that is not seen in the United States because I have many relatives and friends there and sharing with one another is very limited. And that is something that ties me to Puerto Rico, and I have to mention it because it is something that we like very much: these celebrations, this very long Christmas, these parties all the time. It is something that is definitely very attractive and is very limited in the United States.

(Male, 44 years old, biomedical science)

Another element associated with Puerto Rican identity is the use of Spanish as its primary language (Molina Fumero and Barros Díaz 2019). This participant stated that she did not want her children to lose their native Spanish language as a result of living on the US mainland:

I have seen many things with immigrants in the United States, things with mixed couples, since I (had this experience) because my ex-husband is American. [...] And I didn't, I didn't want any cultural confusion; I wanted my children to be bilingual, not to lose their Spanish. I knew that if I moved to the US again, they would lose their Spanish completely. So, it was some strong personal issues that tied me here.

(Female, 47 years old, gynaecology and obstetrics)

Other cultural factors were also highlighted during the interviews as motivators that buffered the negative aspects of life on the island. The following interview excerpt demonstrates how culture is present in the dynamics of doctor-patient interaction, turning it into a source of satisfaction that minimizes the difficulties that derive from salary disparities between physicians in PR and those who work on the US mainland:

So, we arrived (at home) at the same time (referring to her husband, who is also a physician). So, my husband gets out (of the car) with a Costco-like box (that his patient had gifted him). It had pineapples, sweet potatoes. [...] And I got out of the car with a bag full of mangoes and another one full of bananas (that her patient had gifted her). We had to drop the boxes and bags because of our laughter. The first question I asked him; How much does that patient owe you? And he tells me: 'Like 35,000 dollars, and you?' And I say: 'About 12 visits' [loud laughter]. And then my husband tells me: 'Well, no one told us or promised us that we were going to be rich in money, but surely in blessings, fruits, and vegetables' [continues laughing].

(Female, 48 years old, paediatrics)

These feelings of connection to PR's physical and cultural aspects go hand in hand with affective responses that contribute to participants' attachment to this setting.

EMOTIONAL BONDS TO PR AND FAMILY

Some participants explicitly spoke of the fondness they had for their land. This physician was very specific in detailing the emotions she experienced when describing PR:

Well, I actually love my country; I love the temperature; I love the beaches. I mean, I love the country, I love the culture, the music, the everyday life, the Puerto Rican environment fascinates me, it fascinates me.

(Female, 55 years old, general medicine)

It seems that love was sometimes nourished by the recognition that PR was going through times of great need, which served as a motivation to stay. The following quote alludes to this: 'You know Puerto Rico's needs. [...] And obviously, you love your island, and you want to serve here' (Female, 33 years old, general medicine).

Family ties are also given great weight, given that most participants mentioned it as a reason for staying. The subsequent excerpt is from one doctor who addressed himself to the lower salaries for PR-based physicians, emphasizing that being with his family in PR was more important than his income: 'There's the family; there's the weather; there are the people. There are other things - let's say secondary - that are more important sometimes' (Male, 57 years old, otorhinolaryngology).

Another physician echoed this, observing:

I am not telling you that in Puerto Rico, I earn exactly the same or that our families earn exactly the same as in the United States. No, it is much less. Maybe a third less than what we can make (in the US), but really, we give more weight to family. [...] We prefer, then, to earn a little less. [...] Not a little less; a lot less. But we have the satisfaction that we are with the family.

(Male, 44 years old, biomedical science)

In addition to the salary disparity, other challenges that life on the island entailed came to light during the interviews. However, participants continued to prioritize being with their families, which, they emphasized, counterbalanced other negative factors. For example: 'My parents are here, and I owe everything to them. So, for me, those values. [...] I feel that they are worth more than any problem - right? - politically, economically, that I may face' (Female, 47 years old, gynaecology and obstetrics).

In a similar vein, participants elaborated on the importance of the family, especially when they had children because they needed to grow up surrounded by their loved ones:

We have stayed because the family is here. We have stayed because it is important for our children, and it is important for us that they have grandparents, uncles, and close cousins. I believe that this is an experience that forms a human being.

(Female, 47 years old, paediatrics)

There were also participants who commented on the adverse emotional effects of moving family away from PR, which echoed the importance of the disruption of place attachment mentioned in the 'Introduction' section. One doctor, who lived for a few years in the United States and then returned to the island, described this concern:

I felt like, damn, life is passing me by, and I no longer bond with my family. [...] Life is passing me by, and I am here in New York. I always said that I didn't know why one misses the island when you're in other places. [...] But the truth is, you miss the island a lot.

(Female, 47 years old, gynaecology and obstetrics)

The following quote shows the psychological effects of detachment from the island. The doctor alluded to how PR's topography was embedded in her brain as if it were a hard drive, making it difficult for her to adapt to a new place.

It was difficult to identify what the heck it was that moved me to live here again [in PR]. I said, 'But there is something here [in the United States] that kind of doesn't make me feel like I'm okay'. And when I arrived in Puerto Rico, six months had passed when I actually realized that there is something imprinted in our brain, like in the topography, with what you see on a daily basis, how you are used to seeing things, what you receive when you're little. It is that there are memories that you do not realize because they're not logical. One day, in a traffic jam on my way to [the name of the municipality], which was where I moved to, well, I realized it, and I looked to the mountains, and I was like: 'Aha, it's the mountains'. Because nowhere, neither in New York nor in Florida, where I contemplated living at one point, are there mountains. I said: 'There is something here that I don't like that I can't identify', and, well, that's where I identified it: 'Of course! The topography is different!'Totally different. Also, obviously, there is the change of climate. The fact of not seeing the sun in the winter made me. [...] I suffered a bit of depression during my residency for that very reason because those changes in the sun made me [...] 'edgy', and sometimes I wanted to run away. But, the reality, well, more than anything, more than anything was that, was to come back and enjoy our land, which is ours.

(Female, 55 years old, general medicine)

That emotional connection with the island generates in some doctors a sense of satisfaction in living 'back home', which manifests itself in diverse ways, as described in the next section.

SATISFACTION WITH LIFE IN PR

During the interviews, some physicians mentioned that life on the island, despite its economic challenges, allowed them to lead good lives. For example, this doctor explained that in PR he could still practise medicine and enjoy a satisfactory lifestyle, mainly due to the benefits of elements mentioned earlier (i.e. culture and family).

Well, I understood that here [in PR], you can make a homeland. Here you can have a job. Yes, you can serve your people. And also, in the exercise of service, earn an income that, over time, allows you to have a lifestyle

8. This quote refers to the fact that PR is not really an island but an archipelago with a main island and many smaller islands, and also because of its geographical location, you can easily reach other neighbouring islands by boat.

and be able to support your family and give yourself, not perhaps some luxuries, but some basic comforts of a home, car, education. [...] Here you can make a life. Especially, one still finds warm places where there is a community, where there are good neighbours. My whole family is from here [mentions the municipality's name]. I'm a family-oriented person, more than anything else.

(Male, 48 years old, family medicine)

Likewise, other participants stressed that with the salary they earned, life was comfortable enough:

Both my husband and I are financially secure. An acceptable salary. [...] In other words, it's enough to live. Again, I tell you, here you cannot aspire to become a millionaire or anything [...] but you live well. You have a roof; you have food; you have your car, and you can treat yourself from time to time. In other words, we have had economic security, and that is why we have not considered leaving.

(Female, 64 years old, general medicine)

I think I have been lucky because what I am doing right now fulfils me greatly; I have a combination of education and research. Although I also see patients in a small percentage of the time, I have a combination of all three. Certainly, I would earn more money in the United States, but I don't think moving there will give me more satisfaction than I have now. Although I would have more, money is not everything.

(Male, 62 years old, paediatrics)

Island-specific characteristics allowed participants to satisfy their recreational needs in ways that could not be reproduced elsewhere. The following verbalization is from a physician who considered, at one point, moving to the US mainland. After receiving a medical licence to practise in Florida, she decided not to migrate. Describing her motives, she said:

Look, the only reason we're not leaving is that we're boaters. I mean, we love the ocean. And in Florida, there is nowhere to go by boat; I mean, you could go west, but imagine. [...] Here we have Vieques, Culebra, and the Virgin Islands.8

(57 years old, internal medicine)

The sense of satisfaction with living in PR and being able to exercise their profession were identified as factors that reinforced the idea of staying on the island. In addition, as evidenced in the following section, other cultural elements of the US mainland were dissuasive to migration.

US CULTURE AS A DETERRENT TO MIGRATION

The participants' narratives presented the feeling that life in the United States differed significantly from life on the island. They alluded to factors such as the weather in the United States, characteristics or behaviours of estadounidenses, potential experiences of racism in the mainland and overall concern over being a minority. A physician commented on this topic:

Because of my personal situation, it (moving to the US) didn't go beyond thought. Also, my wife, who is a physician too – she has colleagues who have gone to the United States - and this situation of racism, well, it bothers her and makes her very uncomfortable. My wife finds it a little more complicated because, as it is well-described in the literature, there are two situations added to her because she is a woman. In the US, although in Puerto Rico too – But in the US, it (discrimination) is a little more evident because there's a certain stigma, well, for being a woman and, in addition [...] she is black. I mean, she's black. And then, the racial aspects, well, imagine [...] woman, Latina, and black. Imagine that is the 'perfect storm' to be stigmatized and have fewer opportunities.

(Male, 44 years old, biomedical science)

Another participant, who had the opportunity to be trained in the US mainland, mentioned the following:

I studied in South Carolina, which is homogeneous since there is little diversity in every aspect. My school, in particular, the university, was not very diverse. In every aspect, meaning, racial, cultural, socioeconomic, religious, and well, I didn't like to feel like a minority. I kind of didn't like that experience that much.

(Male, 27 years old, psychiatry)

The discomfort of dealing with these other social factors that characterize life in many places on the US mainland (e.g. lack of diversity, detachment between people) led another doctor to decide to return to the island, even if it meant he would earn a lower salary. He explained: 'I think you learn to live with what you have. You know, you accommodate to that. This and also that (clinical) practices in the United States, well, are sometimes economically attractive, but sometimes are lonely practices' (57 years old, otorhinolaryngology).

Another participant explained that he would soon have to go to the United States for a while to finish training. However, he was clear that he would return to PR once the experience was over:

The reality is I like to treat my patients; I like to treat my population. I also just had a baby girl, and I would like my girl to grow up in Puerto Rico. That's what motivates me to return to Puerto Rico when I finish my training. I'll leave for the United States for a year. [...] I would love to return from my training and be part of my program here again so I can invest all the knowledge I gain abroad in the United States to try to create a subspecialty program here; that would be my long-term goal. (32 years old, cardiology)

This sense of commitment to the island, reflected in the above quote, was repeated by other participants on multiple occasions during the interview process, as shown in the next section.

COMMITMENT TO PR AND ITS PEOPLE

Feeling committed and responsible for contributing to the well-being of the island and its people, especially its patients, was described as something

> fundamental. Several physicians expressed themselves in this regard. One participant mentioned when asked about the things that keep physicians in PR:

There are people who are very committed to the Island, and they say: You know, I want to stay here, and I want to be able to give my 100 per cent to Puerto Rico' because if you look at it, there is a health disparity on the island and you know, there are a lot of people who dedicate themselves to minimizing those health disparities.

(Male, 30 years old, pulmonology and critical care)

Another physician stated explicitly that his sense of responsibility towards PR was a significant reason to stay:

I believe that when you graduate in Puerto Rico, you assume a responsibility with Puerto Rico. Although through life you can change, there is something called 'bonding' that you establish with your country, with your people, and there is literature that establishes that where you get your training, you usually stay. Because the patients, ever since you're in training, they get to know you, and you develop that bonding, and it's a responsibility.

(62 years old, paediatrics)

The following excerpts from the conversations with a psychiatrist and an endocrinologist, respectively, reinforce the idea that responsibility for the population they served guided their decision to stay:

I felt that after studying so much in Puerto Rico and receiving so much from Puerto Rico, I was committed to giving back. In other words, if I was trained and educated here, well, the least I can do is serve the same population. Besides, this is what I trained for. In other words, where I first trained and thought about wanting to help other people, it was here; it was because of the population here and the patients I saw here. So, well, it just seemed logical to me to work here.

(Female, 33 years old, psychiatry)

And the reality is that, well, I also feel the obligation, a commitment to be here, to help the people who need our services.

(Female, 33 years old, endocrinology)

In addition to manifesting an attachment to PR, many of the physicians we interviewed expressed a personal value to prioritize and serve 'the Puerto Rican people' that motivated their commitment to staying on the island. This commitment was connected to their knowledge of the particular needs and health disparities faced by local residents and added a sense of mission to their work that was absent in the United States.

DISCUSSION AND CONCLUSION

At the time of writing this discussion (21 September 2022), PR had just been hit by Hurricane Fiona, which left the island subsumed in another prolonged island-wide blackout and catastrophic flooding. The impact this event will have on the migratory patterns to the US mainland of Puerto Ricans in general, and physicians in particular, is still unknown. Still, based on our analysis, it is likely to exacerbate existing migratory patterns. Clearly, additional climate events worsen the island's infrastructure and create further challenges for the already fragile healthcare system. The months-long waiting times experienced by thousands of Puerto Ricans to see a specialist, among other challenges in the provision of services due to the constant power outages, do not bode well for the local population, who now must face the fallout of a new disaster (Noticel 2018).

The findings of this study in no way deny the problematic situations faced by PR and medical professionals who have contributed to a massive exodus motivated mainly by the search for better salaries and working conditions in the United States (Parés Arroyo 2016). On the contrary, the physicians we interviewed who stayed on the island were fully aware of such difficulties, especially those linked to an economic rationale. The stagnant economy has languished due to the accumulation of massive government debt and PR's limited options to restructure its debt due to its colonial status. As a territory of the United States, PR does not enjoy the right of mainland states to file for bankruptcy to receive legal protection from creditor claims or receive assistance from the International Monetary Fund. Government mismanagement of funds, institutional corruption, population decline and the ill effects of the COVID-19 pandemic and natural disasters all make the situation even more complex (Cheatham and Roy 2022). Even in the face of this gloomy panorama and the difficulties faced by the healthcare system (Varas-Díaz et al. 2020; Padilla et al. 2022; Rodríguez-Madera et al. 2021), the participants' verbalizations were full of hope for their country and shed light on their decision to stay. Although the factors that drive physician migration in the Puerto Rican context are mainly economic (e.g. need for training, better salaries), interviews with physicians revealed that other sociocultural and geographic elements (on occasions) tilt the balance in favour of staying on the island for a certain segment of physicians. In this sense, place attachment was manifested in numerous narratives that referred to how participants thought (cognitive dimension of attachment) and felt about PR (emotional dimension of attachment). These cognitive and emotional connections were evident in the emphasis that participants placed on puertorriqueñidad (e.g. the way of being of Puerto Ricans), local culture (e.g. the Spanish language, the eternal parties, music), memories connected to the homeland (something imprinted in our brain) and the emotional ties and sense of responsibility with the island and its people, particularly their patients. Likewise, participants alluded to elements related to the social and physical dimensions of place attachment, including the critical role of family dynamics and feeling connected to PR's geography and topography (e.g. beaches, mountains, small size).

The important role of culture and emotions was emphasized by physicians who had lived on the US mainland and experienced adverse effects on their mental health in light of the disruption of place attachment. This suggests the need for future studies focusing on physicians who have moved and stayed in the United States. Usually, the discussion on medical migration focuses on the appealing factors within the US context (i.e. better salaries and opportunities) that foster migration (Parés Arroyo 2016), minimizing the impact of other more negative experiences associated with migration, such as discrimination for being Puerto Rican and cultural clashes.

In addition to the different components of the place attachment framework that were identified in the study data, the findings reveal that the cultural contrast between estadounidenses and Puerto Ricans, as well as concerns about experiencing discrimination (e.g. racism) as a minority, were deterrents that seemed to foster place attachment at the time of deciding to stay on the island. Although the economic factor is undoubtedly critical, the above findings echo that 'money is not everything', as one participant observed. Given this, the strategies to retain doctors in PR, although having to address structural issues (e.g. economy, infrastructure, governance) that foster the need to leave, must also consider important dimensions of place attachment that motivate people to stay. It will not be enough to provide economic incentives to stay, as the local government proposed in 2017 through Law #14-2017 (Law of Incentives for the Retention and Return of Medical Professionals), which establishes a fixed rate of contribution of 4 per cent on the income generated from medical practice (Microjuris 2017). The commitment and responsibility that doctors feel with their patients, the love for their island and the enjoyment of its attributes must also be important parts of multi-level approaches to foster their permanence in PR, as these topics become part of the identities and lifestyles of these professionals. Therefore, emphasis must be placed on the environmental and social benefits of staying, such as protecting the natural resources and beauty of the island (e.g. its mountains, beaches and unique topography) and championing the local culture (e.g. its family orientation, unique lifestyle and socio-racial diversity). This research suggests these are crucial strategies to retain and attract physicians that have largely been ignored by the emphasis on economic factors alone.

Finally, and as an echo of the song quoted in the opening, two sets of forces coexist in PR that influence physicians' decision to stay or leave: positive, affective forces allude to the richness of the island's culture and its physical and social environment; and a negative set of structural forces results from its complex sociopolitical history and colonial status. Puerto Ricans know these forces and the tensions they entail very well. In the case of physician migration, recognizing the value of attachment dynamics can provide a tremendous opportunity to create greater connections between professionals and the island in order to strengthen this workforce in a place that so desperately needs to retain the physicians that have, thus far, chosen to remain on the island – and, perhaps, to motivate others to return.

FUNDING

This article was funded by the National Institute on Minority Health and Health Disparities of the United States, under grant 5R01MD014188.

REFERENCES

Acevedo, N. (2022), 'Five years after Hurricane Maria, Puerto Rico's power crisis and a new storm revive grim memories', NBC News, 18 September, https://www.nbcnews.com/news/latino/puerto-rico-hurricane-maria-anniversary-power-grid-rcna47729. Accessed 11 September 2022.

Austin, A. (2022), 'Puerto Rico's public debts: Accumulation and restructuring', Congressional Research Service, 2 May, https://sgp.fas.org/crs/row/R46788.pdf. Accessed 9 September 2022.

- Ayala, C. (2007), Puerto Rico in the American Century: A History since 1898, Chapel Hill, NC: University of North Carolina Press.
- Ayala, C. (2021), 'Puerto Rico and its diaspora', Latin American Institute, 27 October, https://international.ucla.edu/lai/article/248568. Accessed 9 September 2022.
- Bad Bunny (2022), 'El apagón', Un Verano Sin Ti, Puerto Rico: Rimas Entertainment. Beccaria, L., McIlveen, P., Fein, E. C., Kelly, T., McGregor, R. and Rezwanul, R. (2021) 'Importance of attachment to place in growing a sustainable Australian rural health workforce: A rapid review', Australian Journal of Rural Health, 29:5, pp. 620-42.
- Begnaud, D. (2022), 'Health care system "collapse": Doctors, experts sound alarm over Puerto Rico's medical system', CBS News, 21 September, https://www.cbsnews.com/news/puerto-rico-health-care-system-collapse/. Accessed 9 September 2022.
- Belluz, J. (2017), 'Why Puerto Rico's power outages could prove very deadly, in one chart', Vox, 26 September, https://www.vox.com/science-andhealth/2017/9/25/16361050/puerto-rico-power-outages-deadly. Accessed 11 September 2022.
- Boley, B. B., Strzelecka, M., Yeager, E. P., Ribeiro, M. A., Aleshinloye, K. D., Woosnam, K. M. and Mimbs, B. P. (2021), 'Measuring place attachment with the Abbreviated Place Attachment Scale (APAS)', Journal of Environmental Psychology, 74, https://doi.org/10.1016/j.jenvp.2021.101577.
- Brown, B. B. and Perkins, D. D. (1992), 'Disruptions in place attachment', in Place Attachment, Boston, MA: Springer, pp. 279-304, https://doi. org/10.1007/978-1-4684-8753-4_13.
- Campbell, S., Greenwood, M., Prior, S., Shearer, T., Walkem, K., Young, S., Bywaters, D. and Walker, K. (2020), 'Purposive sampling: Complex or simple? Research case examples', Journal of Research in Nursing, 25:8, pp. 652–61.
- Cheatham, A. and Roy, D. (2022), 'Puerto Rico: A U.S. territory in crisis', Council on Foreign Relations, 29 September, https://www.cfr.org/backgrounder/puerto-rico-us-territory-crisis. Accessed 3 October 2022.
- Dandy, J., Horwitz, P., Campbell, R., Drake, D. and Leviston, Z. (2019), 'Leaving home: Place attachment and decisions to move in the face of environmental change', Regional Environmental Change, 19:2, pp. 615–20.
- Data USA (2020), 'Puerto Rico', https://datausa.io/profile/geo/puerto-rico#:~ :text=Between%202020%20and%202021%20the,%2421%2C967%2C%20 a%204.32%25%20increase. Accessed 29 September 2022.
- Drenth, M. (2014), Puerto Rico: The Island of Enchantment, Reno: Sunnyscene.
- Eacott, C. and Sonn, C. (2006), 'Beyond education and employment: Exploring youth experiences of their communities, place attachment and reasons for migration', Rural Society, 16:2, pp. 199-214.
- Fried, M. (2000), 'Continuities and discontinuities of place', Journal of Environmental Psychology, 20:3, pp. 193–205.
- González, A. (2020), 'Puerto Rico, la colonia más antigua del mundo marca un nuevo rumbo', International Progresista, 2 November, https://www. bbc.com/mundo/noticias-america-latina-40178522. Accessed 24 October 2022.
- González, G. (2022), 'Fiona's outages rekindle anger over Puerto Rico's privatized electric grid', Politico, 19 September, https://www.politico.com/ news/2022/09/19/fiona-puerto-rico-electric-grid-00057637. Accessed 24 October 2022.

- Graulau Español, B. (2022), 'Médico habla de los problemas con las aseguradoras de Puerto Rico', YouTube, https://www.youtube.com/watch?v=40Xr18D8YKs. Accessed 24 November 2022.
- Hidalgo, M. C. and Hernández, B. (2001), 'Place attachment: Conceptual and empirical questions', *Journal of Environmental Psychology*, 21:3, pp. 273–81.
- Hiruy, K. (2009), 'Finding home far away from home: Place attachment, place-identity, belonging and resettlement among African-Australians in Hobart', master's thesis, Hobart: University of Tasmania.
- Huber, P. and Nowotny, K. (2020), 'Risk aversion and the willingness to migrate in 30 transition countries', *Journal of Population Economics*, 33:4, pp. 1463–98.
- Khanian, M., Serpoush, B. and Gheitarani, N. (2019), 'Balance between place attachment and migration based on subjective adaptive capacity in response to climate change: The case of Famenin County in Western Iran', Climate and Development, 11:1, pp. 69–82.
- Low, S. M. (1992), 'Symbolic ties that bind', in I. Altman and S. M. Low (eds), *Place Attachment*, New York: Plenum Press, pp. 165–85.
- Malavet, P. (2004), America's Colony: The Political and Cultural Conflict between the United States and Puerto Rico, New York: NYU Press.
- Manzo, L. C. (2005), 'For better or worse: Exploring multiple dimensions of place meaning', *Journal of Environmental Psychology*, 25:1, pp. 67–86.
- Microjuris (2017), 'Gobernador firma ley de incentivos donde médicos sólo pagarán 4% de contribuciones', 22 February, https://aldia.microjuris.com/2017/02/22/gobernador-firma-ley-de-incentivos-donde-medicos-solo-pagaran-4-de-contribuciones/. Accessed 24 October 2022.
- Molina Fumero, G. and Barros Díaz, O. (2019), 'La puertorriqueñidad. Nacimiento y desarrollo de una cultura de resistencia', *Revista Estudios del Desarrollo Social: Cuba y América Latina*, 7:3, pp. 58–72.
- Morales, E. (2019), Fantasy Island: Colonialism, Exploitation, and the Betrayal of Puerto Rico, New York: Bold Types Books.
- NimB (2022), '50% of doctors have left Puerto Rico since '09', 18 May, https://repeatingislands.com/2022/05/18/50-of-doctors-have-left-puerto-rico-since-09/. Accessed 2 October 2022.
- Noticel (2018), 'Largas horas de esperas en consultorios es culpa de éxodo de médicos', 22 March, https://www.noticel.com/negocio-de-la-salud/ahora/20180322/largas-horas-de-esperas-en-consultorios-es-culpa-de-exodo-de-medicos/. Accessed 1 December 2023.
- Padilla, M., Rodríguez-Madera, S. L., Varas-Díaz, N., Grove, K., Rivera, S., Rivera, K., Contreras, V., Ramos, J. and Molina, R.V. (2022), 'Red tape, slow emergency, and chronic disease management in post-María Puerto Rico', Critical Public Health, 32:4, pp. 485–98.
- Parés Arroyo, M. (2016), 'Peligrosa fuga de miles de médicos', ENDI, 28 July, https://www.elnuevodia.com/noticias/locales/notas/peligrosa-fuga-demiles-de-medicos/. Accessed 24 October 2022.
- Pedersen, H. D. (2018), 'Is out of sight out of mind? Place attachment among rural youth out-migrants', *Sociologia Ruralis*, 58:3, pp. 684–704.
- Proshansky, H. M. (1978), 'The city and self-identity', *Environment and Behavior*, 10:2, pp. 147–69.
- Ramkissoon, H. (2015), 'Authenticity, satisfaction, and place attachment: A conceptual framework for cultural tourism in African island economies', *Development Southern Africa*, 32:3, pp. 292–302.

- Respaut, R. (2016), 'Take a number: Why people wait more than a year to see a doctor in Puerto Rico', Reuters Investigates, 1 December, https:// www.reuters.com/investigates/special-report/usa-puertorico-healthcare/. Accessed 1 December 2023.
- Riger, S. and Lavrakas, P. J. (1981), 'Community ties: Patterns of attachment and social interaction in urban neighborhoods', American Journal of Community Psychology, 9:1, pp. 55-66.
- Rishbeth, C. and Powell, M. (2013), 'Place attachment and memory: Landscapes of belonging as experienced post-migration', Landscape Research, 38:2, pp.
- Rodríguez-Madera, S. L. L., Varas-Díaz, N., Padilla, M., Grove, K., Rivera-Bustelo, K., Ramos, J., Contreras-Ramirez, V., Rivera-Rodríguez, S., Vargas-Molina, R. and Santini, J. (2021), 'The impact of Hurricane Maria on Puerto Rico's health system: Post-disaster perceptions and experiences of health care providers and administrators', Global Health Research and Policy, 6:44, https://doi.org/10.1186/s41256-021-00228-w.
- Santiago, B. (2020), 'The Puerto Rican dialect: An essential guide to sounding like a Boricua', JP Linguistics, 15 July, https://www.jplinguistics.com/ spanish-blog/the-puerto-rican-dialect-an-essential-guide-to-soundinglike-a-boricua. Accessed 27 October 2022.
- Scannell, L. and Gifford, R. (2010), 'Defining place attachment: A tripartite organizing framework', Journal of Environmental Psychology, 30:1, https:// doi.org/10.1016/j.jenvp.2009.09.006.
- Telemundo PR (2022), 'Convocan mesa redonda con médicos para detener fuga de profesionales de la salud', 1 August, https://www.telemundopr.com/noticias/puerto-rico/convocan-mesa-redonda-con-medicos-para-detener-fugade-profesionales-de-la-salud/2376253/. Accessed 24 October 2022.
- Ujang, N. N. and Zakariya, K. (2015), 'The notion of place, place meaning and identity in urban regeneration', Procedia: Social and Behavioral Sciences, 170, pp. 709–17.
- van Liempt, I. and Miellet, S. (2021), 'Being far away from what you need: The impact of dispersal on resettled refugees' homemaking and place attachment in small to medium-sized towns in the Netherlands', Journal of Ethnic and Migration Studies, 47:11, pp. 2377–95.
- Varas-Díaz, N., Padilla, M., Rodríguez Madera, S., Grove, K., Contreras Ramírez, V., Rivera Rodríguez, S., Vargas-Molina, R. L. and Marzán, M. (2020), 'Decolonial visual resistance as a public health strategy in post-María Puerto Rico', Journal of Visual Political Communication, 8:1, pp. 29–65.
- Varas-Díaz, N. and Serrano-García, I. (2003), 'The challenge of a positive selfimage in a colonial context: A psychology of liberation for the Puerto Rican experience', American Journal of Community Psychology, 31:1&2, pp. 103–15.
- Young, M. and Willmott, P. (1962), Family and Kinship in East London, London: Pelican.

SUGGESTED CITATION

Madera, Sheilla R., Padilla, Mark, Varas-Díaz, Nelson, Ramos-Pibernus, Alíxida, González-Font, Yoymar, Santiago-Santiago, Adrián, Vertovec, John, Matiz-Reyes, Armando, Rivera-Bustelo, Kariela, Mercado-Ríos, Claudia, Rivera-Custodio, Joshua and Grove, Kevin (2023), 'On staying: Non-migration among Puerto Rican physicians', Crossings: Journal of Migration & Culture, 14:2, pp. 213-34, https://doi.org/10.1386/cjmc_00084_1

CONTRIBUTOR DETAILS

Sheilla R. Madera is a professor at Florida International University's (FIU) Department of Global and Sociocultural Studies and associate director of the Research Center for Health and Society, housed at FIU's Center for Research on US Latino HIV/AIDS and Drug Abuse. She is the former executive director of Puerto Rico's Commission for the Prevention of Violence and past president of the Psychological Association of Puerto Rico. She has multiple publications in peer-reviewed journals and edited volumes, published seven books and participated extensively in academic forums in North America, Latin America, the Caribbean, Asia and Europe while disseminating her work. She has received multiple research grants from the National Institutes of Health (NICHD, NIDA, NIMH, NIA, NIMHD and NCI). Her research interests are currently related to health outcomes in contexts marked by economic and natural disasters, as is the case of Puerto Rico. She addresses specific topics including migration, access to healthcare and the role of communities in developing health-related resistance strategies (e.g. community acupuncture and access to independent energy sources).

Contact: Global and Sociocultural Studies, Florida International University, 11200 SW 8th Street, SIPA 334, Miami, FL 33199, USA. E-mail: shrodrig@fiu.edu

https://orcid.org/0000-0003-1967-1341

Mark Padilla is a professor at Florida International University's (FIU) Department of Global and Sociocultural Studies and director of the Research Center for Health and Society. He is a medical anthropologist with crosstraining and experience in public health both domestically and internationally. Having received numerous grants from the National Institutes of Health to support his ethnographic research on HIV/AIDS, the opioid epidemic and disaster response in the Caribbean nations of Puerto Rico and the Dominican Republic, as well as in the United States, his work is located at the intersection of anthropology and global public health. He has published extensively in books and scientific articles on gender, sexuality, substance use, migration, responses to disasters, institutional cultures, health policy and decolonial approaches to health.

Contact: Global and Sociocultural Studies, Florida International University, 11200 SW 8th Street, SIPA 334, Miami, FL 33199, USA. E-mail: marpadi@fiu.edu

https://orcid.org/0000-0002-2532-6280

Nelson Varas-Díaz is a professor of social-community psychology at Florida International University's Department of Global and Sociocultural Studies, where he engages in work related to the linkages between extremity, culture and health. His published work includes Decolonial Metal Music in Latin America (Intellect, 2021), Heavy Metal Music and the Communal Experience (Lexington Press, 2016), Heavy Metal in Latin America: Perspectives from the Distorted South (Lexington Press, 2021) and Defiant Sounds: Heavy Metal Music in the Global South (Lexington Press, 2023). He produced and/or directed the award-winning documentaries Collapse, Acts of Resistance: Heavy Metal Music in Latin America, La Oreja and La Abeja.

Contact: Global and Sociocultural Studies, Florida International University, 11200 SW 8th Street, SIPA 334, Miami, FL 33199, USA.

E-mail: nvarasdi@fiu.edu

https://orcid.org/0000-0003-4695-1146

Alíxida Ramos-Pibernus is an assistant professor at the School of Behavioural and Brain Sciences of Ponce Health Sciences University. She is also a researcher, licensed clinical psychologist and rehabilitation counsellor by training. She completed her postdoctoral training at the Department of Global and Sociocultural Studies, School of International and Public Affairs at Florida International University. She has dedicated her entire career to understanding the role of social, cultural and environmental factors that foster the health disparities experienced by Latinx transgender and non-conforming populations. Her research, supported by the American Cancer Society and the National Cancer Institute, aims to understand and address the interrelated and multilevel factors that foster cancer-related health disparities (cervical and breast) among Latinx transgender women and transgender men in the United States and the Caribbean. She has also worked on understanding social and structural issues impacting the well-being of gender-diverse populations.

Contact: School of Behavioural and Brain Sciences, Ponce Health Sciences University, 388 Zona Industrial Reparada 2, Ponce 00716, Puerto Rico. E-mail: aliramos@psm.edu

https://orcid.org/0000-0002-2457-555X

Yoymar González-Font has a master's in clinical psychology from Ponce Health Sciences University. She has worked as a research assistant (RA) on studies funded by the National Institute of Health. Her experience as an RA has allowed her to work on various mixed-methods studies and gain competencies in using qualitative (i.e. ethnographic observation and interviews) and quantitative method designs (i.e. questionnaires and developing culturally appropriate instruments). She has a publication in a peer-reviewed journal and has presented at various research symposiums. Her research interests are related to the field of public health.

Contact: School of Behavioural and Brain Sciences, Ponce Health Sciences University, 388 Zona Industrial Reparada 2, Ponce 00716, Puerto Rico. E-mail: ygonzalez20@stu.psm.edu

https://orcid.org/0009-0004-2258-5924

Adrián Santiago-Santiago is a graduate student at the School of Behavioural and Brain Sciences at Ponce Health Sciences University. He is currently the co-coordinator of the peer mentoring programme at the Psychological Association of Puerto Rico. He has two publications in peer-reviewed journals. He has also participated in academic conferences in Puerto Rico, the United States and the Dominican Republic, receiving awards twice for his presentations. His research collaboration and interest relate to migration, mental health

> management and energy independence in community and organizational spaces.

> Contact: School of Behavioural and Brain Sciences, Ponce Health Sciences University, 388 Zona Industrial Reparada 2, Ponce 00716, Puerto Rico. E-mail: adsantiago20@stu.psm.edu

https://orcid.org/0009-0000-3831-3342

John 'Jack' Vertovec earned his Ph.D. in anthropology from the Department of Global and Sociocultural Studies at Florida International University (FIU) in 2021. Over the past ten years, Jack has designed and carried out qualitative, mixedmethods and community-based participatory research in economic development, socio-economic inequities and inequalities, and health vulnerabilities and well-being. Currently, he holds dual positions as a senior evaluation associate for a community-based research organization – BSRI – and as a research analyst for the Research Network for Health and Society, housed at FIU's Center for Research on US Latino HIV/AIDS and Drug Abuse. Jack's community participation includes being a community research representative for the Health Care Disparities Task Force at a local behavioural health centre in Hialeah, FL. He also serves on the strategic planning committee for the Society for Community Research and Action. Jack is driven by community collaboration and justice and is particularly interested in discovering innovative ways/methodologies to help amplify the voices of the community members (experts) he works with.

Contact: Center for Research on US Latino HIV/AIDS and Drug Abuse, Florida International University, 11200 SW 8th Street, Miami, FL 33199, USA. E-mail: jvert001@fiu.edu

https://orcid.org/0000-0002-7277-0245

Armando Matiz-Reves is a research associate at Florida International University's Extreme Events Institute. He is a qualified and internationally esteemed leader in community-based public health. His work is focused on the management and support of people in self-improvement and chronic diseases (cardiovascular, HIV/AIDS, renal transplants, cancer) with low-income populations, prisoners, homeless, sexual workers (male/female) and LGTB people throughout several countries in Latin America. His knowledge of global contexts makes him a qualified and positioned professional to assist faculty and students in one of the most important areas of public health research and training today. He had participated in several publications related to photovoice methodology.

Contact: Extreme Events Institute, Florida International University, 11200 SW 8th Street, AHC5, Room 220, Miami, FL 33199, USA. E-mail: amatizre@fiu.edu

https://orcid.org/0009-0000-1190-5540

Kariela Rivera-Bustelo is a research coordinator at the Center for Research on US Latino HIV/AIDS and Drug Abuse at Florida International University. Additionally, she is pursuing a doctoral degree in social determinants of health within the Department of Social Sciences at the Graduate School of Public Health, University of Puerto Rico, Medical Sciences Campus. She holds a licence in nutrition and dietetics and has completed a master's in public health. Previously, she worked as an advisor in nutrition and public health for the Special Supplemental Nutrition Programme for Women, Infants and Children and as a research assistant on various qualitative and quantitative studies on public health and social health inequalities. Presently, her professional role is engaged in research projects related to 'Physician Migration and Its Implications for the Puerto Rican Healthcare System' and 'Disasters, Solar Energy, and Chronic Disease Management in Puerto Rico'. Her academic contributions include numerous collaborations in published peer-reviewed journals and books. Her primary research interests revolve around health, poverty and social and economic disparities.

Contact: Center for Research on US Latino HIV/AIDS and Drug Abuse, Florida International University, 11200 SW 8th Street, Miami, FL 33199, USA. E-mail: kriverab@fiu.edu

https://orcid.org/0000-0003-0378-4923

Claudia A. Mercado-Ríos is a graduate student at the School of Behavioral and Brain Sciences at Ponce Health Sciences University. She has participated in multiple presentations at academic conferences in Puerto Rico, for which she has received awards. Her research collaborations are related to healthcare systems, migration and access to independent energy sources in Puerto Rico. Her research topic interests are strategies for mental health management and the barriers and factors that facilitate access to medical services, specifically with the veteran population of Puerto Rico.

Contact: School of Behavioural and Brain Sciences, Ponce Health Sciences University, 388 Zona Industrial Reparada 2, Ponce 00716, Puerto Rico. E-mail: cmercado20@stu.psm.edu

https://orcid.org/0009-0003-0218-9759

Joshua J. Rivera-Custodio is a doctoral student in the clinical psychology Ph.D. programme at the School of Behavioural and Brain Sciences, Ponce Health Sciences University. He also works as a research assistant at the Health Equity Research Lab within the Ponce Research Institute. His research addresses the impact of oppression on the health of socially excluded individuals, particularly gender minorities living in Puerto Rico. Likewise, he has clinical experience working with disproportionately affected populations, including individuals living with HIV, individuals with serious mental illnesses and survivors of gender-based violence. He has previously coordinated the Behavioural Health Student Research Symposium of Southern Puerto Rico and was editor for the peer-reviewed journal Health and Human Behaviour. He also has experience as a teaching assistant in graduate-level courses, including grant writing, qualitative research methods and social psychology.

Contact: School of Behavioural and Brain Sciences, Ponce Health Sciences University, 388 Zona Industrial Reparada 2, Ponce 00716, Puerto Rico. E-mail: jorivera20@stu.psm.edu

https://orcid.org/0000-0003-0149-667X

> Kevin Grove is an associate professor of geography at Florida International University and editor-in-chief of Political Geography. He researches the politics of resilience in the Anthropocene, with a regional focus on the Caribbean and North American cities. He is the author of Resilience (Routledge, 2018) and several articles in journals, including the Annals of the American Association of Geographers, Geoforum, Progress in Human Geography, Economy & Society, Cultural Geographies and Security Dialogue.

> Contact: Global and Sociocultural Studies, Florida International University, 11200 SW 8th Street, SIPA 334, Miami, FL 33199, USA. E-mail: kgrove@fiu.edu

https://orcid.org/0000-0001-9114-5050

Sheilla R. Madera, Mark Padilla, Nelson Varas-Díaz, Alíxida Ramos-Pibernus, Yoymar González-Font, Adrián Santiago-Santiago, John Vertovec, Armando Matiz-Reyes, Kariela Rivera-Bustelo, Claudia Mercado-Ríos, Joshua Rivera-Custodio and Kevin Grove have asserted their right under the Copyright, Designs and Patents Act, 1988, to be identified as the authors of this work in the format that was submitted to Intellect Ltd.