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BARBADOS, WEST INDIES

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DEPARTMENT OF GOVERNMENT, SOCIOLOGY, SOCIAL WORK AND PSYCHOLOGY

FACULTY OF SOCIAL SCIENCES
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The policy brief is a publication of the Department of Government, Sociology, Social Work and Psychology of the University of the West Indies, Cave Hill Campus. The views expressed in the publication, however, are those of the respective authors and do not necessarily reflect the official position of the Department or the University on any of the issues dealt with by the contributing authors.

ABOUT US

Established in 1976, the then Department of Government and Sociology delivered teaching in Political Science, Sociology and Psychology. Today the Department offers programmes at both the undergraduate and graduate levels in International Relations, Labour and Employment Relations, Political Science, Public Policy, Sociology, Social Work and Psychology.

RESEARCH AIM

The aim of the Department of Government, Sociology, Social Work and Psychology is to produce innovative research that addresses the topical issues facing the Caribbean and world today. The Department carries out research in the areas of democracy and electoral politics, survey design and analysis, social policy, gender and youth development inter alia.

The Department's academic staff possess an extensive list of publications, in the form of books, peer-reviewed articles, peer-reviewed journals, newspaper articles and other non-fiction texts. In addition to its theoretical output, the researchers collaborate with organisations and agencies at the global, regional and national levels.

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Introduction

It is my pleasure to invite you to read the Department of Government, Sociology, Social Work and Psychology's latest policy brief. The Department welcomes your feedback on the pieces contained in this issue which reflect the work of professional researchers and students who present policy relevant appraisals of issues relating to technology, medical concerns, and mental health matters. We also welcome your submissions of policy relevant research and discussion pieces for future policy briefs.

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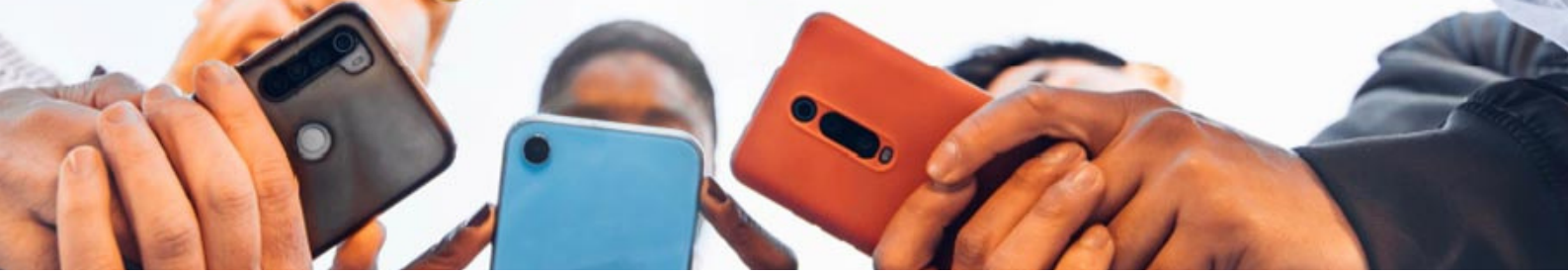

Addressing Problematic Social Media Use in the Caribbean: Implications for Social and Psychological Health Policies and Strategic Interventions in Government, and Education.

by: Troy Smith, PhD, SRMP-C

Introduction

The advent of social media has reshaped the landscape of communication and interaction across the globe. Its impact is profoundly felt in the Caribbean, where social media platforms have become integral to the daily lives of its inhabitants. While social media offers numerous benefits such as enhanced connectivity and access to information, its excessive and unregulated use has given rise to a myriad of psychological and social challenges, collectively termed as 'problematic social media use' (PMSU). The concept of PMSU encompasses a range of behaviours that are characterized by excessive and compulsive use of social media, which can lead to negative psychosocial, psychological and even physical effects (Pellegrino et al. 2022; Smith and Johnson 2020; Smith and Short 2022). Although not yet included in the Diagnostic and Statistical Manual of Mental Disorders (DSM-5), many scholars have suggested that based on existing empirical evidence that PSMU should be regarded as a behavioural addiction (Balcerowska et al. 2020; Luo et al. 2021; Smith and Short 2022).

This policy brief highlights the urgency of understanding PMSU's impact on the Caribbean's psychological health and social dynamics, considering the region's unique socioeconomic and cultural factors (Williams et al. 2021). It aims to guide policymakers, educators and professionals in addressing PMSU's current challenges and pre-empting future issues (Dawson 2022), thereby initiating a comprehensive approach to tackle PMSU's multifaceted challenges in the Caribbean.

Evidence of Problematic Social Media Use in the Caribbean

In the Caribbean, the proliferation of social media has been rapid with over 22.2 million active social media users, which is over 61% of the population over the age of thirteen (Kemp 2021; Smith and Short 2022) and it has also been transformative, bringing about significant changes in communication and information sharing. However, this digital revolution has also introduced challenges, particularly in the form of PMSU. Over a decade of research has found correlations between PMSU and various psychological, social and even physical problems, which lead to the disruption of a user's ability to fulfil their personal, social, educational and professional responsibilities (Boer et al. 2021). These disruptions can be manifested as skewed body image, decreased sport and education performance due to mental preoccupation, less healthy interpersonal relationships, depression eating disorders and even suicidal ideation and behaviour (Bata et al. 2018; Longobardi et al. 2020; Sedgwick et al. 2019; Wilksch et al. 2020).

Recent studies indicate a worrying trend in the Caribbean, where a significant portion of the population, especially among adolescents and young adults, exhibit signs of PMSU. For instance, a study conducted by Lopez and Martinez (2021) found that 30% of teenagers in

the Caribbean showed symptoms such as anxiety, depression, and social withdrawal linked to excessive social media use. These findings are echoed in a report by the Caribbean Mental Health Institute (CMHI), which highlighted an increase in mental health issues among young social media users in the region (CMHI 2022). Other scholars have identified that PMSU may result from needs affordance and coping associated with problems in the real world such as loneliness, social anxiety, stress and low self-esteem based on studies in Trinidad and Tobago and Jamaica (Smith and Short 2022; Smith and Pearce-Dunbar 2023). Further, gender differences have been observed in maladaptive use and preference for online social interaction, with females exhibiting higher levels of both (Smith and Short 2022). However, these results are just a snapshot of the potential problem as there remains limited research in this area within the Caribbean.

The impact of PMSU is not confined to mental health alone. It also extends to social dynamics and behaviours. According to a survey by Thompson and Roberts (2020), there has been a notable rise in cyberbullying, online harassment, and sleep disturbances among Caribbean youths, correlating strongly with increased social media activity. Moreover, academic performance has been adversely affected, with a study by Clarke and Hamilton (2021) demonstrating a negative correlation between PMSU and academic achievement among high school students in the region. Ramkarran et al (2016) in their review of the literature highlighted that social media use is also associated with risky behaviours (e.g., violation of privacy rights and sharing of lewd or pornographic content), obesity (due to lack of physical activity), increases the risk to victimization by cyber predators and may hamper the development of offline communication skills of secondary school students.

The issue of PMSU in the Caribbean is further compounded by a lack of awareness and regulatory measures. Unlike more developed regions where digital literacy and online behaviour are part of educational curricula, such initiatives are still nascent in the Caribbean (Edwards 2023). This gap in digital education and awareness is a critical factor contributing to the rise in PMSU cases

Implications for Social and Psychological Health Policy.

In addressing the growing concern of problematic social media use (PMSU) in the Caribbean, policymakers are confronted with the challenge of not only mitigating immediate health issues but also pre-empting long-term consequences. The increasing recognition of PMSU as a public health issue, linked to mental health problems such as anxiety, depression and decreased self-esteem, underscores the urgency of this task (Jackson 2022). A multi-pronged policy approach is thus imperative.

Firstly, there is a critical need to enhance or develop mental health services specifically targeting issues related to digital addiction and its psychological impacts. This entails revising current health policies to allocate necessary funding and resources and ensuring that mental health professionals are adequately trained to understand the nuances of digital behaviours, as emphasised by Williams and Patel (2023). Secondly, preventive measures and public awareness strategies must be prioritised. Governments and health agencies should launch

campaigns to educate the public about the risks of excessive social media use, in alignment with the Caribbean Health Commission's (CHC 2024) recommendations for programmes promoting healthy digital habits.

Thirdly, sustainable approaches that shift control from the state to the community level are essential. Engaging community leaders in establishing support networks and organising programmes that offer peer support and promote alternative activities can mitigate social media dependence while enhancing social skills, thus addressing underlying factors like social anxiety and loneliness (Gomez and Lee 2022). Finally, increased research and ongoing monitoring are indispensable for understanding and combatting PMSU. Policies should facilitate longitudinal studies and regular trend analysis, as advised by Rodriguez and Sanchez (2022), to stay informed of the evolving dynamics of PMSU and to develop effective, evidence-based responses.

Government Response and Policy Development

In response to the growing prevalence of problematic social media use (PMSU) in the Caribbean, a proactive and multi-faceted policy approach is urgently required. Government strategies must encompass holistic policy development, integrating regulatory frameworks, educational initiatives, and cross-sector collaborations. Enacting regulations that address the root causes and manifestations of PMSU is crucial. As highlighted by Martin and Hughes (2024), this may include implementing age restrictions on social media platforms and guidelines for digital content, approaches that have shown success in other regions. Additionally, education policies must evolve to integrate digital literacy and responsible social media use into curricula. Anderson (2023) emphasises the importance of educating students about the risks of excessive social media use and teaching strategies for responsible online presence management, equipping them with essential skills for the digital age.

Furthermore, the complex nature of PMSU calls for collaboration across various sectors. Governments should foster partnerships with educational institutions, mental health organisations, and social media companies to develop comprehensive strategies to address PMSU. Initiatives could include collaborative research, public awareness campaigns, and resource sharing, as suggested by Lopez and Garcia (2022). Continuous monitoring and evaluation of these policies are essential to ensure their effectiveness, involving periodic reviews and data-driven assessments as recommended by the Caribbean Digital Policy Institute (CDPI 2023). Alongside these measures, investment in public awareness campaigns is vital. As Clarke and Williams (2021) point out, these campaigns can significantly contribute to prevention and early intervention by enhancing public understanding of the signs and dangers of PMSU. Through such a comprehensive and dynamic approach, the Caribbean governments can effectively mitigate the challenges posed by PMSU and promote a healthier digital environment.

Education and Educational Policy

In the context of the Caribbean, the increasing impact of problematic social media use (PMSU) within educational settings underscores the urgency for comprehensive educational policies and interventions. As part of a holistic approach to combat PMSU, it is imperative to embed digital literacy into modern educational

curricula, as advocated by Brown and Thompson (2023). This curriculum should educate students about responsible social media use, online safety, and the psychological impacts of digital platforms, fostering a healthier relationship with technology. Concurrently, teachers, as key facilitators of these curricular changes, require specialised training and resources to effectively guide students in this digital era, a necessity highlighted by Patel and Gomez (2022).

Furthermore, educational institutions need to develop and enforce policies promoting safe and responsible social media use. This includes establishing clear guidelines for social media use during school hours and providing support for students grappling with PMSU, an approach supported by findings from the Caribbean Education Foundation (CEF 2024). Equally important is parental engagement; schools must involve parents by offering informational sessions and resources, as suggested by Davis and Clarke (2023), to help them understand and manage their children's social media use. To ensure the ongoing success and relevance of these measures, Morales and Fernandez (2021) emphasise the importance of continual research and evaluation. This process will assess the effectiveness of these educational policies and interventions, allowing for timely adjustments to meet the evolving challenges associated with PMSU in educational contexts.

Conclusion

In conclusion, the multifaceted challenges posed by problematic social media use (PMSU) in the Caribbean demand an equally multifaceted response, incorporating robust policy interventions, educational reforms, community engagement, and revised mental health strategies. The unique cultural and socio-economic landscape of the Caribbean necessitates tailored approaches to effectively combat the adverse effects of PMSU. With strategic policy development, collaborative efforts, and a commitment to ongoing research and education, it is possible to mitigate the negative impacts of PMSU and foster a healthier, more balanced relationship with social media within Caribbean society.

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Fortifying Digital Frontiers: Strategic Responses to Cybersecurity Challenges in the Caribbean.

by: Troy Smith, PhD, SRMP-C

In the past two years, the Caribbean region has witnessed a significant escalation in cybercrime, marking a pivotal shift in the dynamics of regional and international security and diplomacy. This uptick is not just in the frequency of incidents but also in their sophistication, targeting a broad spectrum of entities including government agencies, financial institutions, and critical infrastructures. A stark representation of this surge is seen in the staggering 137 billion attempted cyberattacks recorded in the Latin American and Caribbean region between January and June 2022, marking a notable increase from the previous year and showcasing a trend towards more sophisticated, targeted strategies like ransomware (Cybersecurity Ventures 2022). This policy brief seeks to discuss some of these cyber incidents and the contributing factors, drawing attention to the need for robust, multi-faceted strategies that safeguard the Caribbean's digital infrastructure and uphold its position in the global diplomatic arena.

The economic impact of such cyber incidents is profound. For instance, Jamaica's economy suffered losses exceeding USD 77 million due to cybercrime in 2016 alone (Wilson-Harris 2019). A notable example of the potential disruption to public services was the 2021 cyberattack on Jamaica's National Water Commission, which significantly impeded water supply systems (Jamaica Observer, "NWC Cyber Attack," May 29, 2021). Additionally, an October 2023 ransomware attack on Trinidad and Tobago's Ministry of Health compromised sensitive health data, underscoring the long-term ramifications for public trust and national security (Carrington 2023).

The case of the Massy Group in Trinidad and Tobago further exemplifies the vulnerability of the private sector. In April of the previous year, this major supplier of consumer goods and pharmaceuticals, with a vast network of stores across the Caribbean, was forced to halt operations due to a cyberattack, leading to significant operational disruptions (Gosine 2023). Since this incident, Trinidad and Tobago have experienced a series of cyberattacks targeting various sectors, leading to service disruptions, data exfiltration and consequential risks such as identity theft and economic losses. These events highlight the need for robust cybersecurity measures and underscore the complex challenges that cybercrime poses to the region's stability and prosperity.

These cyber incidents transcend immediate financial losses, estimated in some cases to be in the millions and pose enduring challenges to economic stability and growth. The ramifications extend to the international stage, where the Caribbean's strategic position in global trade and diplomacy is increasingly influenced by its cyber resilience. The disruption of financial systems and government services by cybercriminals not only erodes internal security but also affects international perceptions and relations, especially in a geopolitical context that heavily weighs digital capabilities and vulnerabilities. For

instance, the impact of the Trinidad and Tobago attack on international investor confidence was notably discussed in a report by the Caribbean Council (Caribbean Council Report 2022).

The surge in cybercrime across the Caribbean region is a complex phenomenon, influenced by a confluence of factors that accentuate the region's susceptibility in the digital realm. Key among these factors are the region's burgeoning economic success and expanding online presence, which, paradoxically, have made it a more attractive target for cybercriminals. This situation is exacerbated by disparate levels of cyber resilience, which can be attributed to varying legislative frameworks, the training and preparedness of law enforcement agencies, and the extent of cyber diplomacy initiatives (Brain and Oyadeyi 2023). Additionally, the availability of data and research, public awareness about cyber threats, and the strength of public-private partnerships play a crucial role in shaping a nation's cyber resilience.

The recent COVID-19 pandemic has further complicated the cybercrime landscape. The pandemic-induced acceleration in the adoption of digital technologies and services across various sectors was often implemented at a pace that outstripped the development of corresponding policies and cybersecurity measures. This rapid and sometimes haphazard digitization, compounded by limitations in relevant staffing and expertise, contributed to a staggering 600 percent increase in cybercrime during the pandemic period (Brain and Oladeyi 2023).

However, it is important to consider the nuanced effects of this trend. A study by Smith (2022) indicated that while instances of cybercrime escalated, the rate of victimisation did not necessarily follow the same trajectory. In some cases, victimisation decreased, possibly due to enhanced guardianship measures. These measures, stemming from heightened cybersecurity awareness and increased media coverage of cybercrime and its impacts, suggest that informed and vigilant communities can effectively mitigate some aspects of cyber threats.

These findings underscore the need for a comprehensive and adaptive approach to cybersecurity in the Caribbean. This approach should encompass legislative reforms, capacity building for law enforcement, effective public-private collaborations, and a concerted effort to raise public awareness. Such a strategy, aligned with global best practices and tailored to the unique challenges of the region, is essential to safeguard the Caribbean's digital future.

Legislative readiness is a fundamental aspect in the battle against cybercrime, as it forms the bedrock of a country's capability to legally address, prosecute, and mitigate these digital threats. The stark differences in the effectiveness of cybercrime legislation and law enforcement training across Caribbean nations highlight the profound impact of legal frameworks and preparedness on the efficacy of cybercrime management.

The 2019 update to Barbados' Data Protection Act is a testament to the proactive stance required in the evolving landscape of cyber threats. This Act represents a comprehensive approach to data protection, aligning with international standards such as the European Union's General Data Protection Regulation (GDPR). It covers various aspects of data handling, providing clear guidelines and stringent penalties for breaches, thereby offering a robust legal framework to protect personal data in the digital age ("Barbados Data Protection Act 2019"). In contrast, cyber laws of countries

like Haiti and even Trinidad and Tobago remain outdated, lacking the specificity and scope necessary to effectively address the nuances of modern cybercrime (Dhoray 2020; Smith and Stamatakis 2021). This disparity not only leaves vulnerabilities in the legal system but also hinders effective cross-border cooperation in cybercrime investigations, as noted by the Caribbean Community Implementing Agency for Crime and Security (CARICOM IMPACS).

Similarly, the disparity in law enforcement capabilities across the region significantly influences the effectiveness of cybercrime management (Smith 2023). The Jamaica Constabulary Force (JCF), for instance, has made commendable strides in upgrading its cybercrime training, recognising the critical need for law enforcement to keep pace with technological advancements ("Jamaica Gleaner, 'Cybercrime Training for JCF', July 2021"). This initiative reflects an understanding that modern policing requires not only traditional investigative skills but also a deep understanding of digital forensics and cybersecurity. The JCF's proactive approach has been integral in both deterring and solving cybercrimes, enhancing Jamaica's overall cybersecurity posture.

On the other hand, the relative lack of advanced cybercrime training and resources in Guyana's law enforcement agencies underscores the challenges faced by many Caribbean nations. Without adequate training in cybercrime detection and investigation, law enforcement agencies struggle to effectively tackle the complex and often borderless nature of cyber offences. This gap in capabilities can lead to a cycle of vulnerability, where inadequate responses fail to deter future cybercriminal activities.

These contrasts in legislative readiness and law enforcement training across Caribbean nations underscore the necessity for a unified regional approach to cybersecurity. By harmonising legal frameworks and investing in law enforcement training across the board, Caribbean nations can build a more resilient front against the ever-evolving landscape of cyber threats. Collaborative efforts, possibly under the aegis of regional bodies like CARICOM, can facilitate the sharing of best practices, resources, and expertise, thereby elevating the overall cybersecurity readiness of the region.

The Caribbean region's response to the growing threat of cybercrime, particularly through avenues of international cooperation and cyber diplomacy, offers valuable insights into the efficacy of collective action in this domain. The collaborative efforts spearheaded by the Organization of Eastern Caribbean States (OECS) serve as a prime example. The OECS, through initiatives detailed in their 2022 report on cybersecurity, has demonstrated a remarkable ability to mobilise regional resources and expertise, fostering a unified approach to tackling cyber threats ("OECS Report on Cybersecurity 2022"). This level of cooperation stands in stark contrast to regions where such collaborative efforts are minimal, highlighting the significance of regional unity in enhancing cybersecurity.

The Bahamas' National Cyber Security Project, launched in 2021, further illustrates the impact of public awareness in combating cybercrime ("Bahamas National Cyber Security Project 2021"). The project's success is largely attributed to its focus on educating the public, a strategy that is less pronounced in other nations. This initiative underscores the importance of an informed citizenry in cybercrime prevention By raising awareness among individuals and organisations, the Bahamas has effectively increased the general populace's ability to

recognise and respond to cyber threats, setting a precedent for other nations in the region.

Additionally, the implementation of industry-specific cybersecurity compliance frameworks, as observed in Puerto Rico's financial sector, offers a model for effective regulation. Puerto Rico's approach involves stringent cybersecurity protocols tailored to the unique needs and vulnerabilities of the financial industry, ensuring a higher level of security and resilience against cyber-attacks. This targeted strategy contrasts with less rigorous approaches observed in countries like Grenada, where industry-specific frameworks are not as well-developed or enforced. The success of Puerto Rico's model highlights the importance of tailored cybersecurity measures that cater to the specific risks and requirements of each industry sector.

The Caribbean region's response to rising cybercrime underscores the necessity of a multifaceted and adaptive strategy. This approach combines regional collaboration, public education, and tailored regulations to effectively counter cyber threats. Implementing a comprehensive policy, including public-private partnerships, is crucial for strengthening cybersecurity infrastructure. These partnerships, as evidenced by the success of the Cybersecurity and Infrastructure Security Agency (CISA) in the United States, facilitate the integration of advanced technologies like artificial intelligence-driven threat detection systems (Anderson et al. 2021) and the updating of cybersecurity laws, inspired by frameworks such as the European Union's GDPR (European Parliament 2016).

Further, the development of human capacity is essential, encompassing professional training and cybersecurity education in school curricula.The effectiveness of such training programmes is highlighted by the Inter-American Development Bank's Cybersecurity Capacity Building Project, while Estonia's national cybersecurity education programme exemplifies the importance of cultivating a security-conscious generation (Vihma 2022). Public awareness campaigns and regular cyber drills, akin to the United States Department of Homeland Security's initiatives, are vital in educating the public and ensuring preparedness in critical sectors (U.S. Department of Homeland Security 2020).

In conclusion, combating cybercrime in the Caribbean requires not only diverse strategies but also a paradigm shift in understanding and responding to digital threats. Examples from the OECS, the Bahamas, and Puerto Rico show that success depends on more than technological solutions; it necessitates an inclusive approach that combines regional cooperation, public empowerment, and industry-specific vigilance. The Caribbean's proactive stance in cybersecurity offers valuable lessons, illuminating a path that balances technological advancement with strategic collaboration and public awareness, guiding the way toward a more secure and cooperative digital future.

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Pathways to Fight Infertility, Stress, Anxiety and Deterioration of Quality of Life through Public Policy.
by: Ms. Tori Goodridge

Executive Summary

Infertility is a global health concern, impacting millions of couples. In Barbados, it accounts for a modest percentage of gynaecology outpatient referrals. This context leaves us unsure of the prevalence of fertility problems. The emotional and psychological toll of infertility is significant, affecting both men and women, and studies have highlighted the various stressors associated with diagnosis and treatment. Understanding the societal, emotional, and health implications of infertility is crucial. Safeguards and support systems need to be in place, especially given the prevalence of conditions like diabetes and Polycystic Ovary Syndrome (PCOS) in the Barbadian population.

What is the issue?

Infertility is defined as the inability to conceive after a year of unprotected sexual activity (Zegers-Hochschild et al. 2017; Mirzaei-Moghadam et al. 2019). In the United States, one in eight couples suffers from infertility, while in developing countries, one in four females has difficulty conceiving, affecting over 186 million women (CDC 2018; WHO 2019). In Barbados, infertility concerns account for 5.4% of gynaecology outpatient referrals, with 61.3% of cases being secondary infertility and 37% being primary infertility (Best and McIntyre 2016).

Infertility can cause significant stress, anxiety, physical well-being, and relational difficulties for both men and women. Studies have shown that several factors, including age at diagnosis, length of infertility, reason for infertility, and failure of treatment, affect the stress experienced by couples dealing with infertility (Hashemieh, Neisani, and Taghinejad 2013; Patel et al. 2016). While research has indicated that women are more likely to experience stress and unpleasant feelings, infertile men are seen as weak and incompetent patriarchs, which directly affects their masculinity and causes emasculation (Dudegon and Inhorn 2003; Ying, Wu, and Loke 2015)

Women reported being stressed 80% of the time (Hashemieh, Neisani, and Taghinejad 2013). When a woman receives an infertility diagnosis, her anxiety levels increase. Considering the significance of the diagnosis, an increase in stress may trigger a traumatic event (Jaffe and Diamond 2011). This has led many to abandon treatment (Anderson, Nisenblat, and Norman 2010). Distress reactions are more common in women due to gender differences in coping and expressing negative emotions (Edelman and Connolly 2000). A study conducted by infertility clinics in northern California evaluated 352 women and 274 men. It was found in the survey that 56% of females and 32% of males had symptoms of depression. Compared to this, 76% of females and 61% of males reported symptoms of anxiety (Pasch et al. 2016).

The policy brief aims to address the multifaceted challenges posed by infertility, with a specific focus on its prevalence and impact in

Barbados. By synthesising global and local data, the brief seeks to inform policymakers, healthcare professionals, and relevant stakeholders about the urgency of developing targeted policies and support systems to address the emotional, societal, and health implications of infertility in the Barbadian context.

Key Objectives:

1. **Raise Awareness:**
- Highlight the global significance of infertility and its prevalence in Barbados, emphasising the need for heightened awareness among policymakers and the public. Propose the integration of infertility considerations into broader public health initiatives, especially considering the high rates of diabetes and PCOS in Barbados, recognising their potential impact on fertility.

2. **Address Mental Health Challenges:**
- Advocate for policies that recognise and address the mental health challenges associated with infertility, acknowledging the gender dynamics and societal biases that contribute to stress and stigma.

3. **Preventative Measures:**
- Advocate for preventative measures, particularly in addressing risk factors like diabetes, hypertension, and obesity, to proactively manage and reduce the prevalence of infertility in the population.

4. **Combat Gender Biases:**
- Highlight the gender biases associated with infertility and propose policies to combat societal stereotypes that contribute to additional challenges for both men and women.

5. **Facilitate Research and Longitudinal Studies:**
- Encourage and support research initiatives, including longitudinal studies, to continually assess the evolving impact of infertility and its treatments, providing a foundation for informed policy adjustments.

6. **Drive Collaborative Efforts:**
- Advocate for collaborative efforts among researchers, healthcare professionals, policymakers, and community stakeholders to address the complex and interconnected aspects of infertility in Barbados.

Why is this important?

It is important to understand why infertility and its consequences are so significant and what we can do about it. The fertility rate of Barbados and several other countries worldwide has decreased over the last few decades. Some people indeed choose not to have children in some instances, while others cannot due to a predisposed condition that affects infertility or simply because they are infertile themselves. The societal expectation of parenthood can put pressure on couples, and infertility can cause personal, relational, and societal problems. Infertility causes the loss of a biological child, pregnancy and birth experience, genetic continuity, and self-image as a fertile person. It also impacts the next stage in the family cycle, relationships, and potential grandparents (Conway and Valentine 1988). Infertility disrupts the expected development of starting a family, leading individuals to seek external help to get pregnant (Sexton et al. 2010).

Infertility has been linked to mental health issues, poor physical wellness, stigma, gender-based violence and relationship breakdown (Loke, Yu, and Hayter 2011; Ozturk et al. 2021; Schmidt et al. 2005, Ngai and Loke 2021; Xin, Li, and Cui 2020; Teklemicheal, Kassa, and Weldetensaye 2022). Infertility affects both men and women, but social biases perceive it as a female issue. As a result, women face additional challenges in dealing with infertility and its treatments, regardless of whether there is a male factor involved. Infertility triggers complex emotions that disrupt women's roles, and having children is considered a crucial part of their identity (Cserepes et al. 2013). Dimka and Dein (2013) found that women experienced verbal and physical abuse from women in their husbands' families. Meanwhile, Mumtaz, Shahid, and Levay (2013) discovered that childless women are generally not allowed to participate in societal rituals, whereas men do not face this form of discrimination. Consequently, it induces stress.

Furthermore, diabetes affects 18.7% of the adult population of Barbados (Hennis et al. 2002). PCOS has been increasing in Barbados, with an estimated 25% of the population suffering from it (Daisley 2020). Infertility is linked to a variety of risk factors, including hypertension, obesity, and diabetes (Abrao, Muzii, and Marana 2013). Given our high rate of diabetes and PCOS, can we assume that a large proportion of our population has reproductive challenges or is likely to experience them? What safeguards are in place if this occurs? The intersection of these conditions can indeed increase the likelihood of individuals experiencing difficulties in conceiving.

Method & Findings

This study employed a mixed-methods approach, combining both quantitative and qualitative research designs to gain a comprehensive understanding of the data. A total of 104 participants, consisting of 20 males and 84 females, were recruited through an online survey. The survey incorporated questions from the General Anxiety Disorder-7 and Infertility-Related Stress Scales. Quantitative data were analysed using statistical methods such as descriptive statistics, Pearson's R, T-Test, ANOVA, and Multiple Regression through SPSS. Additionally, three semi-structured interviews, exclusively with female participants, were conducted, and the qualitative data were analysed using thematic analysis. This dual-method approach allowed for a more thorough and comprehensive exploration of the study's objectives.

The study found a weak but statistically significant positive association between infertility-related stress, intrapersonal stress, interpersonal stress, and anxiety using Pearson's R. Infertility can lead to emotional and psychological consequences, including the loss of a biological child and the inability to conceive, resulting in grief, worry, and feelings of worthlessness. The stress related to infertility is linked to increased anxiety and depression and impacts mental health. The analysis revealed that marital status is a significant predictor of infertility-related stress. Infertility can have broad psychological repercussions, affecting various aspects of life, including personal, social, familial, financial, and occupational aspects. Relationship issues, a lack of sexual desire, and discontentment are common challenges for infertile couples. The qualitative analysis identified five themes: Emotional Stress, Relational Strains, Physical Changes, Social

Withdrawal and Uncertainty. Participants expressed concerns about their relationships, potential breakups, anxiety, and sadness due to infertility. Overall, infertility negatively affects the quality of life in social, psychological, relational, and physical domains.

Policy Implications/Recommendations

There is no single solution to dealing with infertility and its ramifications. We do not know what percentage of the Barbadian population is dealing with infertility and subsequently, stress. It is important to recognise that there is a great deal of complexity associated with research on infertility since infertility is typically only detected when one attempts to conceive, either by a man, a woman, or a couple. Infertility diagnoses cannot be obtained for individuals who are not actively trying to conceive (Greil et al. 2010). Existing screening methods are not geared to identify the wide range of women and men who may be suffering from undiagnosed infertility. Therefore, further research is needed. The incidence and prevalence of infertility-associated risk factors and health outcomes for women, men, and children can be measured and monitored through population-based surveys.

Efforts to promote overall health and prevent chronic diseases, including diabetes, polycystic ovary syndrome (PCOS), and associated fertility issues, employ a variety of programs. The primary objective is proactive health management, utilising education, lifestyle interventions, and early detection measures to empower individuals to make informed choices and contribute to a healthier population. These initiatives focus on disease avoidance and emphasise enhancing overall well-being. In the context of specific conditions like diabetes, PCOS, and related fertility issues, the programmes raise awareness about risk factors, early symptoms, and preventive measures. They provide resources and support, guiding individuals toward healthier lifestyles and effective management strategies. Through community engagement, collaboration between healthcare professionals and public health agencies aims to create a supportive environment, instilling a culture of preventive healthcare practices within the broader population. The goal is to empower individuals to take control of their health, ultimately reducing the burden of chronic diseases and enhancing quality of life.

Initiatives targeting behavioural factors influencing fertility encompass diverse programmes addressing the impact of specific behaviours on infertility. These programmes focus on preventing the use of substances like illicit drugs, tobacco, and anabolic steroids while promoting positive lifestyle choices such as improved nutrition and physical activity. Substance use prevention programmes adopt a comprehensive approach to educate individuals about the detrimental effects on reproductive health, aiming to discourage such behaviours. Additionally, programmes promoting physical activity recognise its positive impact on overall and reproductive health, educating individuals and guiding incorporating exercise into daily routines.

Proactive healthcare involves the early identification of individuals at risk of infertility. Screening mechanisms facilitate timely detection, enabling swift intervention and informed guidance. Early detection empowers individuals with valuable information about their reproductive health journey and allows healthcare professionals to recommend potential solutions. Government health policies can

support fertility through provisions for financial assistance, reproductive health education, and integrating fertility awareness into primary healthcare services. By combining these components, society can be more informed and equipped to navigate and address infertility issues. This proactive stance enhances individual health outcomes and contributes to building a society that prioritises and supports reproductive well-being.

Collaboration among researchers, psychologists, and health institutes holds tremendous potential to eradicate gender bias and eliminate the stigma associated with infertility. By pooling their expertise and resources, these stakeholders can collectively contribute to fostering a more inclusive and supportive environment for individuals facing fertility challenges. Additionally, such collaborative efforts can serve as a powerful vehicle for raising public awareness about infertility and its complexities. Researchers, utilising their scientific expertise, can investigate the root causes of gender bias and stigma associated with infertility. Psychologists contribute valuable insights into the psychological and emotional impact of these biases, offering strategies for resilience and coping. Health institutes, well-versed in public health dynamics, play a crucial role in developing targeted interventions and awareness campaigns to address societal misconceptions surrounding infertility. These efforts aim to dispel myths, promote understanding and contribute to building a more compassionate and informed society. Collaboration among these stakeholders allows for advocacy in favour of policy changes that foster inclusivity and ensure equitable access to fertility-related resources and treatments. This collaborative approach emphasises that infertility is a shared concern requiring collective efforts for meaningful change.

Conducting longitudinal studies on the impacts of infertility and its treatments is crucial for gaining a comprehensive understanding of the long-term effects that extend beyond the initial years post-treatment. While the immediate consequences of infertility and its treatments are well documented, a more extended and nuanced examination is essential to inform healthcare practices, support systems, and public health policies. Longitudinal studies offer the advantage of tracking individuals and couples over an extended period, allowing researchers to observe the trajectory of their physical, emotional, and social well-being. By investigating the enduring effects of infertility, researchers can identify patterns, fluctuations, and potential delayed outcomes that may not be apparent in short-term assessments.

These studies can provide valuable insights into the long-lasting psychological impact of infertility, shedding light on how individuals and couples adapt to and cope with their experiences over time. Understanding the evolving dynamics of mental health, relationship satisfaction, and overall quality of life beyond the initial treatment phase is essential for tailoring ongoing support services effectively. Moreover, longitudinal research can explore the broader societal implications of infertility, such as its impact on career choices, social relationships, and familial dynamics over the years. This comprehensive perspective is vital for crafting informed interventions, educational programmes, and policy recommendations that address the diverse and evolving needs of individuals and couples who have experienced infertility.

Healthcare professionals play a crucial role in addressing emotional distress and stressors for

individuals dealing with health challenges, particularly infertility. The incorporation of therapeutic interventions, such as counselling and mindfulness techniques like yoga, can significantly enhance patients' overall well-being. Qualified mental health professionals provide a supportive space for individuals and couples to navigate the emotional aspects of infertility, addressing feelings of grief, anxiety and stress. Therapy equips individuals with tools and coping strategies to manage the emotional toll of fertility challenges effectively. Mindfulness practices, including yoga and meditation, complement traditional therapeutic approaches by promoting present-moment awareness, fostering calmness, and reducing stress. Integrating these approaches into healthcare not only enhances emotional well-being but also positively impacts physical health, as stress reduction contributes to overall health outcomes. This integrated and patient-centred approach recognises the interconnectedness of mental and physical health, emphasising the importance of addressing emotional well-being in comprehensive healthcare. By integrating these approaches, healthcare professionals create a more holistic and patient-centred care environment.

Conclusion

In conclusion, infertility is a pressing global health concern with profound emotional, societal, and health implications, particularly in Barbados. The policy brief emphasises the need for heightened awareness, mental health support, preventative measures, combatting gender biases, and collaborative efforts to address this multifaceted issue. Longitudinal studies are urged to understand the enduring impacts, while proactive healthcare measures and collaborative interventions can contribute to building a society that prioritises and supports reproductive well-being. Integrating therapeutic interventions into healthcare acknowledges the emotional toll and fosters a holistic approach to infertility challenges.

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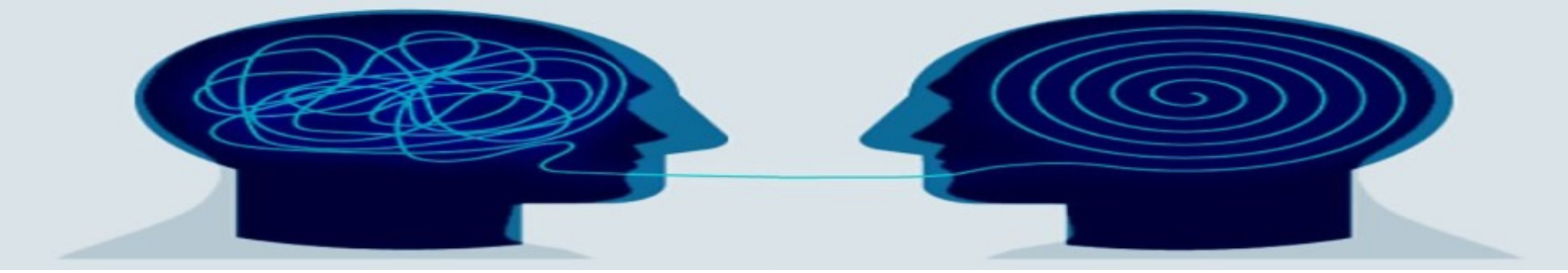

Adversity in Childhood and Public Perception of Governmental Welfare Assistance.

by: Dr Catherine Trotman, DClinPsy
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ABSTRACT

During the COVID-19 pandemic, the number of recipients of welfare in Barbados doubled. However, in 2023, the Welfare Department underwent a mission to significantly decrease the number of beneficiaries (Rawlins-Betham 2023). This led to questions such as “who gets what?” and “who deserves what?” One of the most vulnerable populations in any country are children, and adversity in childhood has lasting effects on the physical and mental functioning of individuals. This adversity is often exacerbated by childhood poverty and limited access to resources, and is linked to increased poverty and unemployment in adulthood. In order to ameliorate these issues, governmental welfare assistance programmes aim to support families in need. However, the ways in which the public perceives recipient’s deservingness of welfare assistance affects the implementation and effectiveness of welfare programmes. The importance of understanding the relationships between childhood adversity, welfare assistance and public perception of governmental programmes geared to reduce this aspect of childhood adversity are discussed.

Adverse Childhood Experiences (ACEs) encompass a range of potentially traumatic events that occur during childhood, and includes physical, sexual, and emotional abuse, as well as emotional and physical neglect (CDC 2020). ACEs extend to household dysfunctions that disrupt a child's sense of safety and stability, such as poverty, witnessing violence in the home, experiencing family member suicide attempts or deaths, living in households with substance misuse, untreated mental health issues, parental separation, and having a household member incarcerated (Boullier and Blair 2018; Campbell, Walker, and Egede 2016; CDC 2020).

The importance of reducing ACEs does not come from a humanitarian standpoint alone. ACEs are associated with increased risk of psychological and physical disability in adulthood, including substance misuse disorders, depressive disorders, suicide, sexually transmitted diseases, physical inactivity, and obesity (Campbell, Walker, and Egede 2016; Chapman et al. 2004; Felitti et al. 1998). Moreover, there is a graded dose-response relationship between incidence and severity of ACEs and later adult physical disease, such as heart disease, cancer, chronic lung diseases, and liver disease (Campbell, Walker, and Egede 2016; Felitti et al. 1998; Iniguez and Stankowski 2016). This enduring disease and dysfunction has significant economic costs (Bellis et al. 2019; Kessler et al. 2010), and so programmes to prevent and reduce the effects of ACEs are economically advantageous.

Research on ACEs within low- and medium-income countries is limited, and children from these countries may encounter different challenges relative to their peers in high-income countries (Solberg and Peters 2020). Persons living in developing countries report a higher overall prevalence of ACEs, and were more likely

to experience multiple ACEs than their peers in more developed countries (Solberg and Peters 2020). As a developing nation, it is important that Barbados is aware of the increased risks associated with ACEs so that steps can be taken to reduce their incidence, as well as to mitigate subsequent negative outcomes. Risk for ACEs is related to low income, living in disadvantaged areas with high unemployment, and high levels of poverty; while a major protective factor is consistent parental employment (CDC 2020; Development Services Group 2015). Indeed, Barbadian children living in poverty appear to be the most vulnerable to ACEs (UNICEF 2006).

In September 2022, the World Bank moved the poverty line from $1.90 USD per person, per day to $2.15 USD based on purchasing power parities due to increases in cost of living worldwide (The World Bank 2022). Globalisation is one of the leading factors perpetuating poverty within the Caribbean, and approximately 30 per cent of the general Caribbean population live below the poverty line (Bowen 2007). The cost of living in Barbados exceeds that of the United States of America by 13.1%, and is the second highest across the Caribbean. This along with a 7.2% unemployment rate, has meant that Barbadians find themselves disadvantaged and in need of assistance (Numbeo 2023). The International Labour Organization (2020) indicated that welfare benefits, formally known as the island's National Assistance Programme, aids approximately 5,000 households in the form of cash grants, and another 6,600 in in-kind benefits which include food vouchers, and payments for funeral expenses and utility bills, with a specific focus on individuals who are classed as vulnerable, for example, the old-aged, disabled and jobless populous, and children.

Poverty is a multidimensional concept, and the 2022 Global Multidimensional Index reported that 2.5% of the Barbadian population is considered multidimensionally poor, with another 3% considered vulnerable to poverty. Nutrition/health was the leading deprived dimension (96%) while the standard of living dimension was the second leading dimension (3.3%) which consists of subdimensions such as the deprivation of assets, housing, and electricity (United Nations Development Programme 2022).

From the above, it is clear that within Barbados, a major effect of poverty lies in nutrition and health, and as a result there should be a focus on ameliorating the effects of childhood malnutrition. Research from a series of studies focusing specifically on protein energy malnutrition in Barbados found that children with this form of malnutrition were more likely to come from homes with a lower household standard of living (Galler et al. 2011; Trotman 2021). This lower standard of living continues into adulthood, with those Barbadian children malnourished in infancy being more likely to have a lower social position in middle age (Galler et al. 2013). Malnourishment in childhood also predicts exhibition of impaired IQ relative to non-malnourished peers, decreased academic skills, deficits in executive function and increased peer aggression (Galler et al. 2011; Waber et al. 2014). As adults, these malnourished children self-reported higher levels of historical child abuse and neglect, and displayed increased personality maladaptivity (Galler et al. 2013; Hock et al. 2018). Both personality maladaptivity, and impaired cognitive performance was also seen in the offspring of malnourished children, indicating that exposure to ACEs can cause dysfunction in later generations (Hock et al. 2018; Hock et al. 2020;

Trotman 2021; Waber 2018).

Governmental welfare assistance programmes play a crucial role in addressing the needs of individuals and families affected by ACEs. These programmes provide a safety net for vulnerable persons, ensuring access to essential resources and services. However, in order for governmental assistance programmes to function effectively, public perception of these programmes and the persons receiving assistance needs to be positive.

Public perception of deservingness refers to the beliefs and attitudes held by the population regarding who is considered deserving of governmental welfare assistance, and perception of poverty and welfare assistance is shaped by various factors, both current day and historical. In the English-speaking Caribbean, the influence of the Victorian Poor Laws has positioned welfare assistance as applicable only to the destitute and infirm, with little to no recourse for able-bodied persons who have fallen on difficult times (Bowen 2007). The deservingness criteria for these laws indicated the deserving poor – those who were infirm; and the undeserving poor – those able-bodied persons fit to work and deemed to have brought poverty upon themselves (Bowen 2007; van Oorschot 2000).

Over a century later, theorists such as De Swann (1988) and Cook (1979) generated similar deservingness models – those who are absolutely incapable of generating their own income, suffer in silence, do not make demands, are incredibly grateful for any assistance offered to them, and who are a part of the same identifying groups (that is, individuals within the same community, family, or ethnic group), are most deserving of welfare assistance (van Oorschot 2000).

More recent tools for understanding public perception of deservingness for welfare assistance focus on similar dimensions that the general public considers when distinguishing whether an individual or family is justifiably entitled to national assistance from the government's welfare department (van Oorschot et al. 2017). One such scale, the CARIN (Control, Attitude, Reciprocity, Identity and Need) Deservingness Principles Scale is based on these principles and has been widely used across the globe to measure public perception of deservingness (Meuleman, Roosma, and Abts 2020).

The CARIN scale defines control as an individual lack of control over, or responsibility for their circumstances – in the public's eyes, having less control equals greater deservingness. Attitude refers to the recipients' level of humility and gratefulness towards assistance, more grateful recipients are considered to be more deserving than those whose attitude toward support is that of entitlement. The criterion of reciprocity speaks to what an individual does in return for receiving support, where recipients higher in reciprocity are considered more deserving. Identity refers to the closeness in proximity or sociocultural grouping of the welfare recipient, those who are close in proximity or share the same groups, where the public can identify with the poor in some way, are viewed as more deserving of support. Finally, the criterion of need indicates that when individuals are in dire need of assistance to survive daily, they are viewed as more deserving of welfare assistance (Meuleman, Roosma, and Abts 2020).

Research involving scales such as this are important in both understanding and changing perception and attitudes towards governmental welfare assistance. However, there is a gap in our local understanding – studies on perception have been conducted mostly within Europe (van Oorschot et al. 2017), but there is no existing

literature on this topic in the Caribbean and more specifically, Barbados. Research into public opinion on current and future welfare assistance programmes in Barbados is needed. Like all governmental endeavours, public support for welfare programmes is necessary for their establishment, maintenance and expansion – if public perception is that these programmes are beneficial, policymakers are more likely to allocate resources and to enact policies that support them.

Assessment of public opinion is also useful in fighting any stigma surrounding welfare programmes. If welfare programmes are viewed as legitimate means of support during difficult times, recipients are more likely to seek help without fear of social judgement or discrimination. That is, public perception of welfare programmes influences the uptake of these programmes. Public trust in the fairness and effectiveness of these programmes leads to the increased likelihood that recipients will participate and comply with programme requirements. This will in turn lead to better outcomes for recipients.

Amelioration of childhood adversity in the form of early malnutrition is imperative, as childhood adversity can cause ripple effects across generations. Previous research indicates that public opinion on the deservingness of welfare recipients is subjective but influenced by personal principles. In order to garner support for current and future welfare programmes, policymakers should examine which principles and conditionalities are most important to the Barbadian public when distinguishing who is most deserving of welfare assistance. The results of this research can help in revealing relationships between personal characteristics and these perceived criteria, aid in the development of social policies, and if necessary, help us to understand what steps are needed to modify these subjective opinions.

Conclusion

The relationships between Adverse Childhood Experiences (ACEs), governmental welfare assistance, and public perception of deservingness are complex and interconnected. Addressing the needs of individuals and families affected by ACEs requires a comprehensive approach that encompasses prevention, intervention, and support services. Governmental welfare assistance programmes play a crucial role in providing resources and support to vulnerable populations, but their effectiveness is influenced by public perception of deservingness.

Policymakers have a responsibility to promote education, combat stigmatisation, ensure equity and fairness, engage stakeholders, promote evidence-based practices, foster cross-sector collaboration, and advocate for policy reform to address the root causes of ACEs and poverty. By prioritising these recommendations, policymakers can work towards creating more inclusive, supportive, and resilient societies that prioritise the well-being of all individuals and families.

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