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BMJ Paediatrics Open

Creating Culturally Inclusive Digital Health Resources for Racialized Families: An Urgent Call to Action

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Keywords:	Anthropology, Health services research, Technology

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3 **Creating Culturally Inclusive Digital Health Resources for Racialized Families:**
4 **An Urgent Call to Action**
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8 Jeslyn Tengkawan^{a,b}, MD, MPH, Richa Agnihotri^c, MD, Ripudaman Singh Minhas^{d,e}, MD, MPH
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11 **Affiliations:** ^aJohns Hopkins Bloomberg School of Public Health; ^bCapella Project Foundation;
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Short title: Creating Culturally Inclusive Digital Health Resources for Racialized Families.

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Abbreviations: BHCK (B'more Healthy Communities for Kids), COVID-19 (Coronavirus Disease 2019)

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8 **What is already known on this topic** - Health information is often not accessible to a large
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10 proportion of families globally. Parents need culturally acceptable and reliable information to
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12 enable them to live healthily and help them make daily parenting decisions.
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14 **What this study adds** – This commentary discusses the need for digital child health resources
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16 that are culturally inclusive, representative, and responsive to the evolving profiles and values of
17
18 diverse parenting communities globally.
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21 **How this study might affect research, practice or policy** - We propose five key imperatives to
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23 ensure no families are left behind in this new digital landscape and how to improve child health
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25 literacy equity.
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31 *“How can I get my son to eat his congee?”*
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33 *“Is it okay that my daughter co-sleeps with her grandparents?”*
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35 *“I always hand feed my children. Is that a problem?”*
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37 *“Is it good to teach my children more than one language?”*
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42 More than ever, parents and caregivers seek online health information and need access to
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44 evidence-based digital health resources to inform their decision-making around their children’s
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46 health and development. We know that parents’ decision-making processes impact health
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48 behaviours and outcomes. As such, they ought to be addressed in a way that honours their
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50 diverse values and perspectives on parenting and children’s health.¹
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3 While a recent survey showed that 68% of American parents searched for health and parenting-
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6 (2021) also showed that more than half of social media users did not check the accuracy of the
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8 health information they retrieved on the internet.
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13 Existing online resources for parents are not accessible to a large proportion of families globally
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15 due to barriers relating to language, culturally-incongruent caregiving frameworks and are
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17 centred on the values of healthcare providers. During the pandemic, where systemic inequities
18
19 have become more exacerbated, the informational needs of marginalized and racialized
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21 communities have become more evident.⁴ As the healthcare sector grapples with implementing
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23 the foundational concepts of equity, diversity, and inclusion into clinical care, we must also
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25 translate these into a digital space - where the vast majority of families are seeking health
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27 information.
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35 This paper discusses the need for digital child health resources that are culturally inclusive,
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37 representative, and responsive to the evolving profiles and values of diverse parenting
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39 communities globally. Here we propose five key imperatives to ensure no families are left
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41 behind in this new digital landscape.
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47 **First**, target communities must be included as equal partners in assessing the community's health
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49 values and perceived needs, understanding what child health information is being accessed,
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51 household child health decision-making dynamics, and the ideal modalities for digital delivery.
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3 Community-based participatory research has successfully engaged marginalized communities as
4 equal partners in the design and implementation of novel in-person health solutions, leading to
5 greater content relevance, uptake, and program sustainability. The same inclusive and
6 participatory principles should be applied to the design and implementation of digital resources,
7 and may be facilitated through rapid online participation strategies (e.g., online polls, comments,
8 direct messages).

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19 **Second**, we must prioritize research avenues that design and evaluate the digital delivery of
20 evidence-based health information to marginalized parenting communities. There are only two
21 relevant studies regarding the effectiveness of social media interventions in accessing child
22 health information among marginalized and minority populations: Grow2gether and B'more
23 Healthy Communities for Kids (BHCK) studies.

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32 The Grow2gether study randomized 87 low-income, low-literacy women in Philadelphia. The
33 intervention was conducted for 11 months in the form of interactive Facebook group discussions,
34 and participants received stipends.⁵ The program was found to be feasible and acceptable in the
35 local community, with participants actively engaged in the discussion. BHCK randomized 28
36 low-income, predominantly African-American Baltimore communities.⁶ Overall, social media
37 and text messaging analysis showed high dose delivery, high fidelity, and medium reach.

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48 **Third**, academic and community partners must co-create approaches to improve health literacy
49 and critical thinking amongst diverse communities to battle the spread of misinformation, which
50 is seemingly ubiquitous and present in all languages and mediums. Many healthcare
51 organizations have developed social media recommendations to help clinicians share general
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3 health information online. However, digital health education tools must be customized to the
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5 diverse cultural, linguistic, and literacy profiles of the target populations.
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10 **Next**, it is important to scale up and adapts the strategies of the successful social media
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12 intervention programs, such as BHCK and Grow2gether, to the unique profiles of other
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14 communities.^{5,6} This is mainly to mobilize child health science in a way that is relevant and
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16 applicable to parents' experiences and needs.
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21 **Finally**, the global community must commit to continuing to overcome digital inequities for
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23 families who do not have internet access or smartphones through multisectoral collaboration. As
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25 asserted by Evans et al., “Color-blind” or pan-cultural approaches are inherently inequitable, in
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27 that these generic resources are built around Eurocentric values of parenting, child health, and
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29 program delivery.⁷
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35 We urge our colleagues through this call to action to improve the quality, rigour, diversity, and
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37 accessibility of child health resources globally. As more parents engage in social media, there are
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39 more opportunities lie ahead to increase child health literacy and advance public health through
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41 population-based interventions that leverage social media.
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45 46 47 **References**

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Creating Culturally Inclusive Digital Health Resources: An Urgent Call to Action

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Short title: Creating Culturally Inclusive Digital Health Resources.

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19 More than ever, parents and caregivers seek online health information and need access to
20 evidence-based digital health resources to inform their decision-making around their children’s
21 health and development. We know that parents’ decision-making processes impact health
22 behaviours and outcomes. As such, they ought to be addressed in a way that honours their
23 diverse values and perspectives on parenting and children’s health.¹
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33 While a recent survey showed that 68% of American parents searched for health and parenting-
34 related information,² only 59% found helpful parenting information.³ A survey by Neely, et al.
35 (2021) also showed that more than half of social media users did not check the accuracy of the
36 health information they retrieved on the internet.⁴
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45 Existing online resources for parents are not accessible to a large proportion of families globally
46 due to barriers relating to language, culturally-incongruent caregiving frameworks and are
47 centred on the values of healthcare providers. During the pandemic, where systemic inequities
48 have become more exacerbated, the informational needs of marginalized cultural-linguistic
49 communities have become more evident.⁵ As the healthcare sector grapples with implementing
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3 the foundational concepts of equity, diversity, and inclusion into clinical care, we must also
4 translate these into a digital space - where the vast majority of families are seeking health
5 information. Families can become reluctant to seek healthcare services as they do not have an
6 adequate literacy on health. However, this goes both ways, where lack of access in healthcare
7 services also reduce chances of these families to receive adequate health information, further put
8 them at risk of unhealthy habits and parenting styles.
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11 This paper discusses the need for digital child health resources that are culturally inclusive,
12 representative, and responsive to the evolving profiles and values of diverse parenting
13 communities globally. Here we propose three key imperatives to ensure no families are left
14 behind in this new digital landscape.
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31 **First**, we must ensure accessibility of child health information and leveraging the new
32 technologies. However, alternatives of old modalities, such as radio, should be considered
33 whenever the new technologies are not available. The global community must commit to
34 continuing to overcome digital inequities for families who do not have internet access or
35 smartphones through multisectoral collaboration. We should engage whole of society approach
36 with multi-dimension resource to maximize any intervention, especially in improving health
37 literacy through digital health. As asserted by Evans et al., “Colour-blind” or pan-cultural
38 approaches are inherently inequitable, in that these generic resources are built around
39 Eurocentric values of parenting, child health, and program delivery.⁶
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12 **Second**, child health information should be relevant and culturally acceptable. Academic and
13 community partners must co-create approaches to improve health literacy and critical thinking
14 amongst diverse communities to battle the spread of misinformation, which is seemingly
15 ubiquitous and present in all languages and mediums. Many healthcare organizations have
16 developed social media recommendations to help clinicians share general health information
17 online. However, digital health education tools must be customised to the diverse cultural,
18 linguistic, and literacy profiles of the population of interest.
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31 Community-based participatory research has successfully engaged marginalized communities as
32 equal partners in the design and implementation of novel in-person health solutions, leading to
33 greater content relevance, uptake, and program sustainability. The same inclusive and
34 participatory principles should be applied to the design and implementation of digital resources,
35 and may be facilitated through rapid online participation strategies (e.g., online polls, comments,
36 direct messages).
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47 **Finally**, these modalities should be evidence-based, evaluated for their impacts in individual and
48 community settings. We must prioritize research avenues that design and evaluate the digital
49 delivery of evidence-based health information to marginalized parenting communities. There are
50 only two relevant studies regarding the effectiveness of social media interventions in accessing
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43 **Abbreviations:** BHCK (B'more Healthy Communities for Kids), COVID-19 (Coronavirus
44 Disease 2019)
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8 “How can I get my son to eat his congee?”
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10 “Is it okay that my daughter co-sleeps with her grandparents?”
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12 “I always hand feed my children. Is that a problem?”
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14 “Is it good to teach my children more than one language?”
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19 More than ever, parents and caregivers seek online health information and need access to
20 evidence-based digital health resources to inform their decision-making around their children’s
21 health and development. We know that parents’ decision-making processes impact health
22 behaviours and outcomes. As such, they ought to be addressed in a way that honours their
23 diverse values and perspectives on parenting and children’s health.¹
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33 While a recent survey showed that 68% of American parents searched for health and parenting-
34 related information,² only 59% found helpful parenting information.³ A survey by Neely, et al.
35 (2021) also showed that more than half of social media users did not check the accuracy of the
36 health information they retrieved on the internet.⁴
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45 Existing online resources for parents are not accessible to a large proportion of families globally
46 due to barriers relating to language, culturally-incongruent caregiving frameworks and are
47 centred on the values of healthcare providers. During the pandemic, where systemic inequities
48 have become more exacerbated, the informational needs of marginalized cultural-linguistic
49 communities have become more evident.⁵ As the healthcare sector grapples with implementing
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3 the foundational concepts of equity, diversity, and inclusion into clinical care, we must also
4 translate these into a digital space - where many families search for relevant health information.
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6 Families can become reluctant to seek healthcare services as they do not have an adequate
7 literacy on health. However, this goes both ways, where lack of access in healthcare services also
8 reduce chances of these families to receive adequate health information, further put them at risk
9 of unhealthy habits and parenting styles.
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19 This paper discusses the need for digital child health resources that are culturally inclusive,
20 representative, and responsive to the evolving profiles and values of diverse parenting
21 communities globally. Here we propose three key imperatives to ensure no families are left
22 behind in this new digital landscape.
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31 **First**, we must ensure accessibility of child health information and leveraging the new
32 technologies. However, alternatives of old modalities, such as radio, should be considered
33 whenever the new technologies are not available. The global community must commit to
34 continuing to overcome digital inequities for families who do not have internet access or
35 smartphones through multisectoral collaboration. We should engage whole of society approach
36 with multi-dimension resource to maximize any intervention, especially in improving health
37 literacy through digital health. As asserted by Evans et al., “Colour-blind” or pan-cultural
38 approaches are inherently inequitable, in that these generic resources are built around
39 Eurocentric values of parenting, child health, and program delivery.⁶
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3 All communities must be included as equal partners in assessing the community's health values
4 and perceived needs, understanding what child health information is being accessed, household
5 child health decision-making dynamics, and the ideal modalities for digital delivery.
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12 **Second**, child health information should be relevant and culturally acceptable. Academic and
13 community partners must co-create approaches to improve health literacy and critical thinking
14 amongst diverse communities to battle the spread of misinformation, which is seemingly
15 ubiquitous and present in all languages and mediums. Many healthcare organizations have
16 developed social media recommendations to help clinicians share general health information
17 online. However, digital health education tools must be customised to the diverse cultural,
18 linguistic, and literacy profiles of the population of interest.
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31 Community-based participatory research has successfully engaged marginalized communities as
32 equal partners in the design and implementation of novel in-person health solutions, leading to
33 greater content relevance, uptake, and program sustainability. The same inclusive and
34 participatory principles should be applied to the design and implementation of digital resources,
35 and may be facilitated through rapid online participation strategies (e.g., online polls, comments,
36 direct messages).
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47 **Finally**, these modalities should be evidence-based, evaluated for their impacts in individual and
48 community settings. We must prioritize research avenues that design and evaluate the digital
49 delivery of evidence-based health information to marginalized parenting communities. There are
50 only two relevant studies regarding the effectiveness of social media interventions in accessing
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3 child health information among marginalized cultural-linguistic populations: Grow2gether and
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5 B'more Healthy Communities for Kids (BHCK) studies.
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9 The Grow2gether study randomized 87 low-income, low-literacy women in Philadelphia. The
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11 intervention was conducted for 11 months in the form of interactive Facebook group discussions,
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13 and participants received stipends.⁷ The program was found to be feasible and acceptable in the
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15 local community, with participants actively engaged in the discussion. BHCK randomized 28
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17 low-income, predominantly African-American Baltimore communities.⁸ It is important to scale
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19 up and adapt the strategies of the successful social media intervention programs, such as BHCK
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21 and Grow2gether, to the unique profiles of other communities.^{7,8} This is mainly to mobilize child
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23 health science in a way that is relevant and applicable to parents' experiences and needs.
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27 Overall, social media and text messaging analysis showed high dose delivery, high fidelity, and
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29 medium reach.
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34 We urge our colleagues through this call to action to improve the quality, rigour, diversity, and
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36 accessibility of child health resources globally. As more parents engage in social media, there are
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38 more opportunities lie ahead to increase child health literacy and advance public health through
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40 population-based interventions that leverage social media.
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