

# Building a culture of health in Kentucky to address racism a public health crisis

## Abstract

**Importance:** Health disparities are the leading underlying cause for disproportionate pandemic effect. A sustainable solution must inculcate and address key community stake holders needs to implement strategies. Racism is recently identified as a public health crisis and in order to address it a sustainable multidisciplinary strategy calls for action. Clearly existing solutions are not sustainable and effective and is evident through the case study of Kentucky in the current research. The elimination of health disparities is a multidisciplinary and cross sector approach which the RWJF action framework inculcates.

**Observations:** Kentucky State has the Gini and Social Index Score that needs urgent attention. Racial segregation is prominent among the black versus white compared to other racial minorities. Income inequality is highest among the blacks than the other minorities and white in Kentucky. Infant mortality rate, premature deaths, preventable hospitalizations, and unhealthy behavior is highest among the black community members compared to their white counterparts.

**Conclusions and Relevance:** The identified sustainable strategy and entry points for key Kentucky stakeholders can help address the racism. The stakeholder analysis matrix of the research can help implement proposed strategy feasibly and effectively. The action framework itself is structured in a way that the issues framed utilizing the model can help disseminate and implement the strategy sustainably.

**Keywords:** racism, culture of health, RWJF framework, public health

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## Introduction

A nation's asset is the health of its citizen because if the citizens are not well, the nation's economy and families struggle while the national security is at stake.<sup>1</sup> Health inequity in the United States has led to a 4-year gap in life expectancy among different racial and ethnic groups.<sup>1</sup> Although access to affordable and needed health care is not the only solution, one must also consider social determinants of health to narrow the gap.<sup>1</sup> Hence, health equity could be defined as the perfect state in which individuals can achieve their full health potential without any barriers to achieving it.<sup>2,3</sup> The opportunity to attain that full potential for well-being depends on the living and working conditions and other resources enabling people to achieve that potential to be healthy.<sup>4</sup>

Health Disparities serve as metrics for assessing progress towards health equity; hence, both concepts are interrelated.<sup>4</sup> Poverty is not just about an individual's low income but about the combined effect of three cores like economic success, power and autonomy, and being valued in the community.<sup>5</sup> To rise from poverty, i.e., mobility from poverty, all three areas mentioned must be measured and acted upon as ignoring one of these might leave the individual at struggle.<sup>5</sup> Gini Index is one measure to determine income distribution equality among the population of a community.<sup>6</sup> Social Capital Index measures a community's social stability and well-being, both perceived and actual.<sup>7</sup>

Community-based solutions like an action, program, policy, or law that is driven by community-based organizations, faith-based organizations, "employers, healthcare systems and providers, public health agencies, policymakers, and others" have the potentials to improve health equity by influencing health and factors affecting inequities.<sup>2,8</sup>

The vital steps for achieving health equity includes identification of essential health disparities concerning affected stakeholders, changing

law, environment, and practices to eliminate inequities, evaluating the short and long term efforts and outcomes, and finally reassessing those existing strategies to plan the next steps.<sup>4</sup> Policies impact health factors, affecting health outcomes like length and quality of life.<sup>9</sup> The elimination of health disparities is a multidisciplinary and cross sector approach which the RWJF action framework inculcates. Hence the objective of current review is to evaluate, frame and devise solution surrounding racism and health equity in Kentucky state utilizing RWJF action framework. To frame and devise solution the review first performs Kentucky state descriptive analysis by dividing raw data into categories (I-VI). After determining the assets, resources as well as health equity status at county level the RWJF action framework is utilized to frame and devise solution (Table 12) keeping in mind the status quo.

## Descriptive statistics of Kentucky state

The data for the Kentucky state has been analyzed in STATA SE 16 for the descriptive analysis, the data utilized is collected from two data sources: Kentucky 2020 County Health Rankings<sup>10</sup> and the opportunity insights website.<sup>11</sup> The raw publicly available data was in csv format which was uploaded in STATA for cleaning and refinement. The data is categorized at the following levels to understand Kentucky demographics that might influence health disparity:

- I. Health outcomes
- II. Behavior
- III. Preventive and healthcare services outcome
- IV. Educational and income outcomes
- V. Social and environmental outcomes
- VI. Occupational and commute/work conditions

## Health outcomes

The overall life expectancy in the Kentucky State is about 74 years lower than the national average, as depicted in Table 5<sup>10</sup> of the Appendix. By stratifying the life expectancy through the different races, Blacks have the lowest life expectancy years compared to other races, while the data for AIAN was missing in the file. The premature mortality is highest (about 582 deaths) among the blacks in Kentucky as of 2020, as depicted in Table 6 of Appendix. The Child Mortality among black seems to be the highest (about 111 deaths per 100,000 population) among all races and the state average as depicted in Table 7 of Appendix. The infant mortality also appears to be disproportionately higher (14 deaths per 1000 live births) among Blacks than other available race data in the dataset, as depicted in Table 8.

## Behavior

As depicted in Table 9, about 15% of the Kentucky population lacks adequate food access, while 4% of the population are low-income groups who do not live near a grocery store. The percentage of adults who report fewer than seven hours of sleep in Kentucky is high, making about 39% of the state's population. For emotional, physical, and mental well-being, it's essential to have sufficient sleep daily (about 7 hours).<sup>10</sup>

## Preventive and healthcare services outcome

As depicted in Table 11, the average number of physically unhealthy days is higher than the national average for Kentucky (5.03). The percentage of low-birth-weight babies among Black and American Indian/Native Alaskan is the highest (about 16%) than state and national average. The rate of adults with obesity is higher than the national average (35%) in Kentucky. The reason might be a lower physical activity (31%) and limited access to exercise opportunities (56%), lower than the national average. The preventable hospitalizations among the blacks are the highest (9072) compared to other races in the Kentucky state, while the state is above (6648) the national average. About 5% of the population below age 65 are uninsured in Kentucky (Figure 2). The total number of households with at least one disabled family member is 571,016 in Kentucky (Figure 1). The total population above 65 years of age is 778,913 (Figure 1).

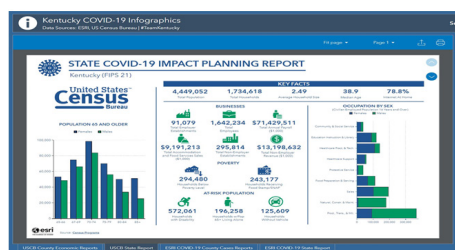


Figure 1 Kentucky State Demographics at a glance (Census Programs, 2021).



Figure 2 Kentucky State demographic snapshot.<sup>19</sup>

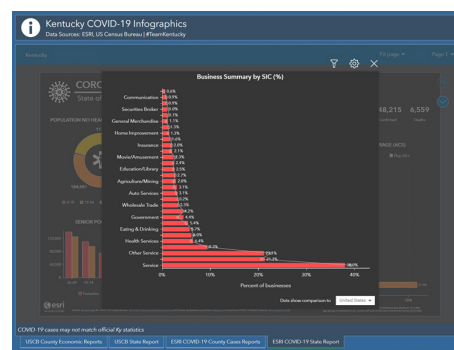


Figure 3 Proportion of business and employer sectors in KY where dots represent comparison to United States.

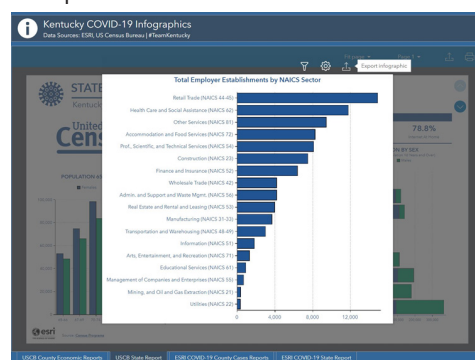


Figure 4 Types of Employer Establishments in Kentucky.

## Educational and income outcomes

As per Table 4 of Appendix, the School expenditure per student seems to be low in Kentucky State than at the national level.<sup>11</sup> The test score percentile is very low (-1.44), indicating other factors that might have impacted the lower scores. Only 0.5% of college students graduated college as of 2014 in Kentucky on an average. The median household income was the lowest (\$45,279) in Kentucky compared to the national average, as depicted in Table 10. Among the racial income inequity, blacks have the most insufficient median household income (\$34,503) than their counterparts, making it lower than the state average median household income. As depicted in Figure 1, 78.8% of the household has internet access.

## Social and environmental outcomes

It is evident from Table 2 that there persist a problem of both racial segregation (5%) and higher poverty rates (19%) than at the national level in Kentucky.<sup>11</sup> The Social Capital index is on an average negative (-0.5) which is not a good indication of Kentucky's social stability and well-being. The Gini index is high (40%), indicating income inequality from the data. The local government expenditure seems to be relatively low on the local community welfare activities (\$1393) in the Kentucky state as of 2014 (Table 4). The percentage of teens 16-19 years who are neither in school nor working in Kentucky in 2020 was high, making about 11% of the age group (Table 9). Among the racial residential segregation, the most significant segregation is among black and white races scoring the highest among all racial segregation (47.6). As depicted in Table 10, the proportion of the population living in the rural area is highest in the state of Kentucky (71%), meaning limited healthcare and other needed resources.<sup>12</sup> The highest proportion of racial group comprising of Kentucky state population is black (about 4%) compared to other races.

## Occupational and commute/work conditions

It is evident from Table 3 that a higher proportion of commuters (33%) commute to work for more than 15 minutes one way residing in Kentucky State.<sup>11</sup> The diversity in terms of nonnative residents of Kentucky is low (1%), which could mean culturally less diverse. Finally, the inflow and outflow migration rate is slow (2%) in the state of Kentucky as of 2014, indicating fewer opportunities or interest for those who might be considering relocation for one or the other reason. Figure 1 reflects the total number of Kentucky households with cars and internet service.

## Investigating root cause of racism and health inequity

The presence of racism at the individual and structural level impacts the ability to land good opportunities and results in overall poor physical and mental health.<sup>13</sup> People of color, especially the black community, are more prone to bear the burden of disproportional health (Race, Racism and Health, n.d.), as evident in the Kentucky State data analysis. The black racial population tends to suffer from disproportional life expectancy, premature deaths, infant mortality, racial segregation of housing opportunity, and risks of chronic diseases/conditions compared to their White counterparts.<sup>13, 14</sup> This health inequity exists partly from “the stress of being ignored, silenced or oppressed”.<sup>13,15</sup> Health disparities tend to worsen among racial and ethnic minorities due to microaggression, stigma, racism, discrimination, conscious and implicit bias, ultimately contributing to poor health outcomes.<sup>16</sup> It is also established that health inequities are closely related to historical and contemporary injustices like racism.<sup>15</sup> Racism harms one’s educational attainment, ability to gain/seek employment and diminishing potential wages.<sup>15</sup> Racial segregation is associated with higher deaths, exposure to environmental toxins, lower tax bases, fewer job opportunities, and fewer services like healthcare and others.<sup>15</sup> Health inequities would decline significantly if racism is addressed/eradicated through a culture of health.<sup>15</sup> The Robert Wood Johnson Foundation action framework helps frame such issues by identifying ways to create a culture of health.<sup>15</sup> Individual’s, State’s, Businesses, and Community’s pathways to progress are framed through racial equity, diversity, and inclusion.<sup>17</sup>

## Step 1 Stakeholders of Kentucky and their racism concerns

Potential solutions to eradicate racism at all levels includes the involvement of stakeholders of the particular state/county. Grassroots

organizations and community members of any state serve as the heart of civil rights activities<sup>15</sup>. In the past, community and grassroots level activities have solved issues of local racial segregation.<sup>15</sup>

The key stakeholders of Kentucky State can be divided as described in Table 12. The group categorization has been informed by Economic tracker<sup>18</sup> and Esri databases for Kentucky<sup>19</sup> data. The proposed entry points and actions for each stakeholder with Government above all seem appealing, as depicted in Table 12 of Appendix. The decision matrix guides the reasons being informed by the level of interest, influence, and impact. The impact and interest being the significant decision-maker for the reasons behind the agreement to implement the devised strategy. At the same time, the level of influence acts as a facilitator for implementing the devised strategy proposed for stakeholders.

## Needs of stakeholders

Recently, businesses tend to adapt the stakeholder capitalism model where businesses and corporates care about consumers and the planet and their profits.<sup>20</sup> The several ways in which racism is bad for any business is: it reduces creativity, encourages toxic work culture, causes higher health issues and absenteeism among vulnerable employees, tarnishes reputations of the business, and lose its customer who intends to discontinue giving business to those without anti-racist approach in their business model.<sup>20</sup> Hence it is obvious that businesses cannot afford to lose their economic profits, which partially depends on their market reputation, thriving work culture, and efficient employees.<sup>20</sup> It is also evident through a pandemic situation that a sustainable solution to address the business inequities needs to be implemented for inclusive growth and improved economic growth.<sup>21</sup>

## Step 2 RWJF framework- Racism and culture of health in Kentucky

As proposed prior in this paper, building a culture of health can help address racism and health inequities associated with it. The stakeholder needs have been identified, and Table 12 in Appendix has been made, including the following constructs. Each construct of the action framework has been identified as entry points for identified stakeholders of Kentucky. The following section identifies guided determinants, root causes of health inequity associated with racism and proposes potential informed recommendations to address each root cause by devising informed strategies in Kentucky.

**Table 1** Descriptive Statistics of Kentucky County Health Ranking 2020 Data analyzed in STATA SE 16

Variable	Obs	Mean	Std.Dev	Min	Max
High School Graduation Rate	121	94.54382	3.34823	84.0796	100
Unemployment Rate	121	5.189599	1.508778	3.089299	13.23993
Children in Poverty %	121	26.75124	9.049274	5.1	47.8
Income Inequality Ratio	121	4.992088	0.788185	3.418552	8.689388
% Single Parent Household	121	32.16366	6.735583	16.60583	59.37962
Social Association Rate	121	9.324993	4.763207	0	21.39249
Violent Crime Rate	121	96.99403	76.79928	0	611.9961
Injury Death Rate	121	52.52026	9.772699	28.17746	76.62735

**Table 2** Descriptive Statistics of Kentucky in terms of segregation, social capital and criminal rates 2001-2014 data obtained from opportunity insights data<sup>11</sup>

Variable	Obs	Mean	Std. Dev.	Min	Max
Income Segregation	120	0.018153	0.023173	-0.01336	0.122421
Poverty Segregation	120	0.016597	0.022584	-0.0195	0.111999
Affluent Segregation	120	0.017671	0.024328	-0.00023	0.133435
Racial Segregations	120	0.054975	0.049676	0	0.314367
Gini Index	119	0.395363	0.073873	0.256237	0.667314
Poverty Rate	120	0.189644	0.081844	0.040617	0.453801
Social Capital Index	120	-0.50087	0.943469	-2.81523	2.296285
Total Crime Rate	111	0.00486	0.003034	0.000557	0.014219

**Table 3** Diversity, Work Commute and Migration rate in Kentucky<sup>11</sup>

Variable	Obs	Mean	Std. Dev.	Min	Max
Percent Foreign Born	120	1.03499	0.948933	0.024123	5.929861
Migration Inflow Rate	120	0.026091	0.016796	0	0.087285
Migration Outflow Rate	120	0.024942	0.013259	0.005352	0.096035
Fraction with commute <15 min	120	0.326861	0.081253	0.131928	0.520546

**Table 4** Schooling and Community expenditure Factors<sup>11</sup>

Variable	Obs	Mean	Std. Dev.	Min	Max
School Expenditure per Student	120	6.027548	0.980357	4.542789	11.69031
Student Teacher Ratio	120	16.43781	1.587526	13.23408	23.48847
Test Score Percentile	120	-1.44589	6.588962	-16.3302	17.73723
High School Drop Out Rate	119	0.000446	0.016195	-0.03697	0.06976
College Tuition	38	5103.171	4400.208	760	16900
Percent College Grads	38	0.0054	0.166465	-0.23421	0.493859
Local Government Expenditures	120	1393.42	483.3133	773.7278	4035.796

**Table 5** Additional Measures (Life Expectancy) of County Health Ranking 2020 Kentucky Data<sup>10</sup>

Variable	Obs	Mean	Std. Dev.	Min	Max
Life Expectancy by County	121	74.44711	2.191061	69.01621	79.68335
Life Expectancy AIAN	0				
Life Expectancy Asian	7	86.08179	4.157813	79.79357	91.63269
Life Expectancy Black	27	74.9775	3.604984	70.09911	86.30023
Life Expectancy Hispanic	14	92.79797	6.084781	84.78469	105.5274
Life Expectancy White	28	76.33139	1.457072	73.52878	79.34388

**Table 6** Premature Death and mortality as per Kentucky County Rankings Data 2020<sup>10</sup>

Variable	Obs	Mean	Std. Dev.	Min	Max
Number of Premature Deaths	121	1228.083	6795.902	46	74299
AIAN Premature mortality	0				
Asian Premature mortality	4	208.9392	96.01848	112.7282	326.7715
Black Premature mortality	36	582.124	162.1248	282.478	1012.808
Hispanic Premature mortality	5	219.4172	26.38932	185.7101	258.5937
White Premature mortality	36	461.0584	80.76389	289.3517	725.9396

**Table 7** Child Mortality in Kentucky and by race as per Kentucky 2020 county ranking data

Variable	Obs	Mean	Std. Dev.	Min	Max
Child Mortality Rate	72	65.43214	19.11389	30.92242	114.8954
Child Mortality AIAN	0				
Child Mortality Asian	1	48.98359	.	48.98359	48.98359
Child Mortality Black	5	111.4401	43.67059	73.23944	163.4715
Child Mortality Hispanic	2	57.4164	3.305798	55.07885	59.75395
Child Mortality White	5	55.44347	15.37643	35.74641	73.11615

**Table 8** Infant Mortality in Kentucky and by race as per Kentucky 2020 county ranking

Variable	Obs	Mean	Sd	Min	Max
Infant Mortality Rate	30	7.130549	1.632914	4.685917	10.09009
Infant Mortality Rate AIAN	0				
Infant Mortality Rate Asian	0				
Infant Mortality Rate Black	4	13.60842	3.569996	10.32702	18.28154
Infant Mortality Rate Hispanic	2	5.493827	0.087297	5.432099	5.555556
Infant Mortality Rate White	4	6.510473	2.423547	4.219409	9.651239

**Table 9** Kentucky 2020 General community profile

Variable	Obs	Mean	Std. Dev.	Min	Max
Frequent Physical Distress (%)	121	15.51022	1.904002	10.79672	20.97173
Frequent Mental Distress (%)	121	15.593	1.586537	11.53725	19.99661
Adults with Diabetes (%)	121	13.72231	3.309896	7.5	24.7
HIV Prevalence rate (%)	17	159.9882	101.2132	35	431.3
Percent Food Insecure	121	15.42479	2.846117	7.6	22.5
Limited Access to Healthy Food (%)	118	4.781071	4.692959	0	35.17923
Insufficient Sleep (%)	121	38.69624	2.263514	30.74122	45.27671
Disconnected Youth (%)	40	10.74516	5.404002	2.111267	25.05285
Segregation index black/white	82	47.60081	13.97617	18.36352	88.64501
Segregation index non-white/white	109	34.5095	12.53157	5.615755	65.6262
Severe Housing Cost burden (%)	121	11.31339	2.545547	6.135511	20.25247
Percent Homeowners	121	71.51902	6.441346	46.90834	85.02012



**Table 10** Median Household Income

Variable	Obs	Mean	Std. Dev.	Min	Max
Median Household Income	121	45279.43	11843.9	26278	102136
Median Household Income AIAN	18	48146.17	21881.17	11823	94688
Median Household Income Asian	25	71812.44	37812.8	21250	183661
Median Household Income Black	76	34503.46	10919.63	13056	72045
Median Household Income Hispanic	61	45558.28	21981.95	17431	133389
Median Household Income White	90	47040.73	11994.28	25201	99695
Percent Black	121	3.736202	4.220934	0.23459	23.83987
Percent AIAN	121	0.329734	0.122453	0.133557	0.763359
Percent Native Hawaiian/oth PI	121	0.664836	0.718751	0.052802	4.587701
Percent Hispanic	121	0.067152	0.080369	0	0.419765
Percent Non-Hispanic White	121	2.643442	1.706549	0.792034	9.988046
Percent Proficient in English	121	0.499671	0.605748	0	2.852676
Female	121	50.25458	1.576835	42.84751	52.86134
Percent Rural	121	71.39901	27.90377	1.373101	100

**Table 11** Kentucky 2020 health profile

Variable	Obs	Mean	Std. Dev.	Min	Max
Average # of Physically Unhealthy days	121	5.032718	0.523298	3.668336	6.401534
Average # of Mentally Unhealthy days	121	4.964295	0.396525	3.937529	5.903129
% Low birth Weight	121	8.909034	1.237462	5.960265	11.95241
% Low birth Weight AIAN	1	16.34615	.	16.34615	16.34615
% Low birth Weight Asian	9	8.251192	1.206448	6.27907	10.09464
% Low birth Weight Black	37	16.02849	4.928407	8.333333	28.94737
% Low birth Weight Hispanic	23	7.729874	1.442941	5.783582	11.18012
% Low birth Weight White	40	8.281533	1.00553	6.892684	10.8229
% Smokers	121	22.31011	2.71156	15.98312	31.8777
% Adults with obesity	121	35.23967	4.242454	21.6	46.3
% Physically Inactive	121	31.65702	4.721437	20.2	40.3
Food Environment Index	118	7.373729	0.65456	4.3	8.6
% with access to exercise opportunity	121	55.57868	25.92602	0	100
% Excessive drinking	121	15.68306	1.870427	12.67322	24.16173
Teen Birth Rate	120	41.65585	12.1327	8.728474	70.05189
Chlamydia Cases	121	301.9017	161.2173	35.8	1056.7
Primary Care Physician Ratio	0				
Mental Health Provider Ratio	0				
Preventable hospitalizations	121	6648.182	2497.551	2891	15420
Preventable hospitalization Asian	5	3287.6	872.0601	2201	4283
Preventable hospitalization Black	54	9072.852	10181.12	829	63636
Preventable hospitalization Hispanic	8	5960.375	4151.787	1519	12532
Preventable hospitalization White	54	6365.315	2696.022	3325	15215
% with annual mammogram	121	36.4876	6.452539	19	50
% with annual mammogram Asian	9	31.33333	8.558621	19	41
% with annual mammogram Black	55	41.78182	10.25542	20	73
% with annual mammogram Hispanic	11	34.45455	13.08712	20	61
% with annual mammogram White	55	39.65455	5.686951	26	50
% Vaccinated	121	40.99174	8.390963	14	55

# 1. Making Health a Shared Value: “How can individuals, families, and communities work to achieve and maintain health?”<sup>22</sup>

- **Civic Engagement:** “Participating in activities that advance the public good”.<sup>22</sup> A civic can be engaged by casting a vote or volunteering for suitable public activities, raising their voice for the good of the community health and well-being to bring change.<sup>22</sup> Kentuckians’ volunteer service was worth an estimated \$2.3 billion monetary value.<sup>23</sup> About 97.6% of residents regularly talk or spend time with friends and family, and 51.2% of residents favor neighbors, while 15.9% of residents do something positive for the neighborhood.<sup>23</sup>
- **Sense of Community:** “Strong Social connections help communities thrive”.<sup>22</sup> People who feel a sense of belonging, happiness, and trust in the community they live in have improved health and well-being.<sup>22</sup> If they feel connected, they are more inclined to work healthy ways and work with others to improve health.<sup>22</sup> As per county health ranking 2020 data,<sup>24</sup> the mean Social Association rate in Kentucky was 9.3%. It seems to be a lower rate but varies among counties of Kentucky. The descriptive statistics for overall Kentucky in terms of Social

Association rate is depicted in appendix Table 1. Due to the lower social association rate, it seems less feasible to improve the rating unless an intervention is introduced by a community-based organization and addresses its concerns. Black business owners tend to suffer a loss of wealth in adversity like pandemics due to limited knowledge, access to capital, and support from the local community.<sup>25</sup> Evaluating existing inclusive growth strategies and supporting black-owned businesses might help elevate the business inequity and improve the State economy.<sup>25</sup> This construct serves as an entry point for community members,<sup>26</sup> government, and non-government stakeholders of Kentucky.

# 2. Fostering Cross-Sector Collaboration: This construct measures how we can motivate cooperation across all sectors<sup>22</sup>

- **Policies that support collaboration:** Collaboration through policies targeting influential non-health sectors like law enforcement provides significant population health results by encouraging health-related policies.<sup>22</sup> Collaboration among Communities and Law enforcement and Support for Working Families can be measured in two ways.<sup>22</sup> This entire construct serves as an entry point for the Kentucky State government.<sup>17,26</sup>

**3. Creating Healthier, More Equitable Communities:** This component measures how we can support and offer equitable access to healthy choices and develop a safe environment that nurtures children and supports aging adults.<sup>22</sup>

- **Built Environment:** Built environment and physical condition include where we live, learn, work and play, determining and impacting our health and well-being.<sup>22</sup> Several indicators like walkability index measure it, youth safety (Table 1-3 for KY), and Public libraries.

- **Social and Economic Environment:** The amount of money someone earns, the place where they live impacts their social connection and establishes barriers to living a healthier life because of where they live.<sup>22</sup> This is measured by residential segregation (for KY, refer to Table 2 & 9) that puts people away from opportunities because of their race and accessibility to healthcare.<sup>22</sup> “More racially integrated neighborhoods integrate equitable opportunities to education and economic opportunities”.<sup>22</sup> For housing burden and affordability among Kentuckians, refer to Table 9. Kentucky’s educational environment and opportunities could be found in Tables 1 & 4. There is racial inequality among Kentucky public schools and teachers where the proportion of Whites is disproportionately higher in participation.<sup>17</sup> About 31% of Black students compared to 59.3% White students scored proficient on elementary school reading tests.<sup>17</sup> A significantly lower rate of Black students than their White counterparts receive opportunity and support for Post-High School preparation and CTE industry certificates in Kentucky.<sup>17</sup> Several recommendations have been made to solve the issue at hand, which includes diversifying the teaching workforce and expanding dual credit enrollment.<sup>17</sup>

- **Policy and Governance:** Policies help enhance collaboration between community, government, and organizations and include policies like addressing air quality, climate change to create healthier environments for all and equitable to all.<sup>22</sup> However, Kentucky fails to implement air quality policies surrounding smoking, compared to other states, and it’s important to note the impacts it might cause on health outcomes. This entire construct serves as an entry point for Educational and Government/Policy Maker stakeholders of Kentucky.<sup>26</sup>

**4. Strengthening Integration of health services and systems:** It measures how healthcare providers can work with institutional partners to address patient needs and realities.<sup>22</sup>

- **Access to care:** Access means more than affordability for healthcare, so it means one can access high-quality care at affordability. It can be measured by the availability of public health systems, Dental visits, and Insurance coverage.<sup>22</sup> Kentucky has 22% of the smoker’s population (Table 11), less percentage of the population is screened for a mammogram, and only about 41% of the population is vaccinated for a flu shot (Table 11). The proportion of preventable hospitalizations is high, meaning there is a gap in providing preventive services and utilization. The rural hospitals in Kentucky during the COVID-19 pandemic were on the verge of closure which is the primary source of healthcare for those uninsured and public insurance rural beneficiaries.<sup>27</sup> Governmental interventions like subsidizing might help in eradicating the problem. This entire construct serves as an entry point for Healthcare and Government Stakeholders of Kentucky.<sup>28,29</sup>

**5. Outcome:** Improved population health, well-being, and equity action area.<sup>22</sup> This construct of the framework helps us understand

if our efforts to build the culture of health have been practical.<sup>22</sup>

- **Enhanced Individual and community Well-Being:** Better health-related quality of life and the perspective of an individual on how they view their life can help determine if the individual well-being is served or not. Several scales are available to measure well-being and one’s life satisfaction, like the OECD better life index.<sup>22</sup> The access to services domain of the OECD index puts Kentucky at the bottom 32%. The Jobs domain puts Kentucky in the bottom 42%, and Community domain scores Kentucky in the bottom 44%, Health scores Kentucky into the bottom 9%. Safety domain scores Kentucky into the bottom 19% compared to other regions of the world.<sup>30</sup>
- **Reduced Health care Costs:** There are several ways to measure this construct, including preventable hospitalization rates.<sup>22</sup> For Kentucky, the proportion of preventable hospitalization is relatively high. Among blacks is the highest surfacing that needed primary care for better disease management is absent<sup>22</sup> in Kentucky (Table 11).

## Conclusion

It is evident through our understanding of Health equity and factors affecting it in this paper that for any effort to be effective and sustainable, a multifactorial approach involving multiple stakeholders is necessary. The first step to any need assessment for implementing an effective strategy is determining the community’s key stakeholders and needs. Through community profiling, once it is determined what they need, it becomes feasible to strategize the policies and actions evolving around the needs. If the needs of the stakeholders, factors impacting their needs aren’t addressed, feasibility for strategy implementation might go in vain. Utilizing the RWJF action framework after determining the community’s needs, its existing status for that component affecting racism and health equity, determining key entry points of stakeholders helps us develop a sustainable solution for acting stakeholders. We are identifying the underlying cause of issue to solve it and framing the issue in the context of the needs and feasibility of the proposed actions in the RWJF action framework. The framework allows determining where the community stands in terms of each construct affecting population health, where the root causes of racism stand in terms of development or sustainability for devised actions, and the key stakeholders that could serve as implementers of proposed actions entry points. There are several limitations to this existing review including granularity of data as well as missingness of data values for some county. Future studies might want to utilize social determinants of health data from area health resource files to determine health care infrastructure in framing solutions.

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## Conflicts of interest

The author declares there is no conflict of interest.

## References

1. Lavizzo-Mourey R. How to build a culture of health. *QJM*. 2017;110(2):59–60.
2. National Academies of Sciences. *Report Highlights: Communities in Action*. 2017.
3. CDC. *Health Equity*. Centers for Disease Control and Prevention.
4. Braveman P, Arkin E, Orleans T, et al. What is Health Equity? *Robert Wood Johnson Foundation*. 2017.

5. Acs G, Maitreyi A, Conner AL, et al. Measuring Mobility from Poverty. ABOUT THE US PARTNERSHIP ON MOBILITY FROM POVERTY. 2018.
6. Hayes A. Gini Index. Investopedia. 2022.
7. Global Social Capital Index by country. Solability.
8. CDC. *What We Can Do To Promote Health Equity*. Centers for Disease Control and Prevention. 2021.
9. *County Health Rankings Model. County Health Rankings & Roadmaps*.
10. Kentucky Downloads 2020. *County Health Rankings & Roadmaps*.
11. Data. *Opportunity Insights*.
12. 14.4 Problems of Rural Life. In: Social Problems. University of Minnesota Libraries Publishing edition, 2015. This edition adapted from a work originally produced in 2010 by a publisher who has requested that it not receive attribution. 2016.
13. Race, Racism and Health. RWJF.
14. *Black/African American - The Office of Minority Health*. US. Department of Health and Human Services Office of Minority Health.
15. Gee GC. *Leveraging the Social Determinants to Build a Culture of Health Racism as a Social Determinant of Health Inequities*. 2016.
16. Bui J. Combating Racism Advances Health Equity. *Office of Minority Health*. 2021.
17. *Kentucky Chamber of Commerce Releases Report on Racial Inequity in Kentucky*. Kentucky Chamber. 2021.
18. Economic Tracker. *Opportunity Insights*.
19. Census Programs. Kentucky COVID-19 Infographics. ESRI.
20. Bagalini A. *5 ways racism is bad for business*. World Economic Forum. 2020.
21. Dua A, Julien J, Kerlin M, et al. The case for inclusive growth. *McKinsey*. 2021.
22. Taking Action - RWJF. *Robert Wood Johnson Foundation*.
23. Kentucky Volunteering Highlights. *AmeriCorps*.
24. *County Health Rankings & Roadmaps, Kentucky*. County Health Rankings.
25. Baboolall D, Yancy N, Stewart S, et al. *Building supportive ecosystems for Black-owned US businesses*. McKinsey.
26. Building a Culture of Health Louisville, Kentucky - RWJF. *Robert Wood Johnson Foundation*.
27. *Kentucky Hospital Association Representing Kentucky Hospitals and Health Systems COVID-19 Report*. 2020.
28. RWJF Culture of Health Community Portrait Louisville, Kentucky. 2018.
29. Linda M, Akins CR, Smith GL, et al. *Mayor's Commission for Racial Justice and Equality*; 2020.
30. *Kentucky OECD Regional Well-Being*. OECD.