

Community Assessment: Physical Activity for Women Ages 20-35 with Children

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The city of New Brunswick lies in central New Jersey and is part of Middlesex County. New Brunswick has an approximate population of 57,073 residents. The city is a center for culture and education, and a “port of entry city” that welcomes immigrants. Our community assessment of New Brunswick focuses on the physical activity of women between ages 20 to 35 with children. The need for this assessment is identified by examining the data on high poverty rates and health issues faced by this population. Our assessment was done via online research, speaking with community members and leaders, and visiting the community ourselves to see the resources available to its residents. Upon gathering the information, we inspected problems faced by our target population that may limit their physical activity and consider improvements that could be made to the city that would foster increased activity levels.

Several data points regarding the population of women 20 to 35 may be skewed by the tens of thousands of Rutgers students residing in New Brunswick, such as the city's median age of 23.3 years, the 42% of female population in the city being 20 to 35, and the 17.2% married percentage for this age group (1). The prominent races for this age group dwelling within the city include 56% Hispanic, 21.5% White, 12% Black, and 8% Asian. Since New Brunswick is known as a “port of entry city”, most of its residents are from foreign countries, mainly Mexico, India, and Dominican Republic. This is also reflected in the 45.9% of residents who speak Spanish, making it the second most spoken language aside from English (6).

New Brunswick has a large group of people living in poverty compared to not only neighboring areas, but also as compared to the United States as a whole. The federal poverty level in 2018 has been defined as \$12,140 for a household of one, \$16,460 for two, \$20,780 for three, and so on (3). With these numbers in mind, women ages 18-34 make up the highest

portion of women living below the poverty line. More than half of those 18 to 24, 59.2%, are living in poverty compared to the state rate of 14.8% for this age group. Middlesex is at 6.3%, an amount that's much lower than the state poverty level, signifying that New Brunswick is much worse off than its wealthier neighbors, bringing down the county's poverty average. For ages 25 to 34, 34.5% of women are in poverty, compared to 12.2% for the state and yet even lower, 9.1% for the county (1, 4). To put this into perspective, average rent for a 1 bedroom apartment here is about \$1,480 a month, or \$17,750 a year (5). With the data showing the significant poverty levels, the average annual income of \$45,901+/- \$4,089 in New Brunswick seems more representative of those working in the city rather than actual residents who live there. Several large organizations and companies are located in New Brunswick, such as Robert Wood Johnson University Hospital, Johnson & Johnson, St. Peter's University Hospital, and Rutgers University, so it is possible that their employees residing in New Brunswick can skew the data (4).

Contributing to the city's high poverty rate is the high unemployment rate. Nearly half of our target group, 47.51%, are considered unemployed, although many do hold temporary jobs such as cleaning houses or factory positions (5). Many women in our demographic have children that are too young to be left alone, so they do not work. Childcare is also very costly and the jobs they are employed at may not pay enough to cover those costs. Another factor to consider as to why many women have low incomes is their education level. The majority of the women over 25 have not received any higher education, 27.6% have an education of less than 9th grade (6). Women with only a high school education make up the second largest group at 25% of the 25 and over female population (6). Since education level directly influences one's income, this further illustrates the widespread poverty in our target population.

A community health assessment done by Rutgers noted that New Brunswick had a “greater reporting of diabetes, arthritis, high blood pressure, asthma, heart disease, and obesity compared to the rest of Middlesex County” (7). Heart disease and diabetes are among the top 10 causes of death in the U.S., and the other health conditions are significant contributors to mortality (8). A study done in 2011 asked New Brunswick residents the question “does anyone in your household have diabetes,” to which 36.9% answered yes (9). Comparing this data to the official diabetes data for the county, 8.1%, and for the state, 8.8%, the difference is significantly notable and not favorable for New Brunswick. With such pervasiveness of deadly diseases in New Brunswick, one might be thankful the city nicknamed itself the “healthcare city” with many medical facilities available. Ironically though, despite the resources present, poverty and identification issues have led to only 4.7% of women 18 to 24, and 6.8% 25 to 34 having healthcare coverage and access to higher quality care (9). A healthy lifestyle is even more crucial with limited healthcare in this case, especially since most, if not all, of the health problems listed above, could be prevented or ameliorated through attention to physical activity.

Major leaders and organizations in New Brunswick have ongoing campaigns and outreach programs to address these physical activity related health problems. Mayor Cahill’s Wellness Campaign offers monthly fitness and wellness activities for families such as yoga and group fitness classes, health screenings, and cooking demonstrations. The activities are free and take place at Robert Wood Johnson Fitness and Wellness Center, parks, and other open spaces (10).

Two prominent organizations in the community, New Brunswick Tomorrow and Saint Peter’s Healthcare System, collaborate on a diabetes outreach program that provides diabetes

screenings and education in order to identify residents who are diabetic or at risk of diabetes and help them have access to proper care. It's important to note that local residents who are familiar with the community are involved in this program; these include the Esperanza Neighborhood “health ambassadors” and the Community Health Advocates/Promotoras. Their involvement in the program and promotion of its services may make it more likely for residents to take advantage of them because there is a sense of comfort and familiarity. In addition to providing screenings and education, the program offers residents pedometers and socks to encourage walking and physical activity (12). Saint Peter’s University Hospital also has a community health van that travels to schools, public housing complexes, and other areas where healthcare services may be limited. Some of the services offered include free health screenings for blood pressure and cholesterol, as well as education on various health topics such as diabetes, nutrition, and physical fitness (13).

Physical resources in New Brunswick include a health club, a recreation center, and 13 public parks. Robert Wood Johnson Fitness and Wellness Center offers discounted \$30 monthly memberships to residents of the city. Members have access to over 150 group fitness classes such as Zumba, pilates, and yoga. Childcare services are also included with the membership, which is important to our demographic because childcare is a significant barrier to physical activity (14). The available personal trainers can also help women in our demographic create an exercise routine that works for them. Even though this a resource women with children should consider, the \$30 monthly membership fee can be a barrier because they are from significantly low income households.

About 9.2% of New Brunswick land is utilized for parks and open spaces (15). Parks such as Buccleuch, Recreation, and Alice Jennings Archibald have playgrounds, athletic fields for soccer and baseball, and basketball courts. However, the majority of these parks are situated on the edges of the city, but residents tend to be more centrally located where there are not only fewer parks, but also smaller ones with less amenities (17). With lack of transportation being an issue for these women, it is very rare that they are able to utilize any of these parks. One of the centrally located parks is Feaster Park, which has an unlevelled hill that blocks the back of the park, posing public safety concerns. However, the city has plans to improve both Feaster and Pitman parks with input from local residents. Involving residents in park renovations can increase the chances that they will actually use the parks. These improvement plans are part of a larger effort started in 2016 to improve New Brunswick parks which included building fitness and workout courses at Buccleuch and Alice Jennings Archibald Parks (18).

The fitness courts, which are outdoor bodyweight gym facilities, were installed this past September in Buccleuch Park and Alice Jennings Archibald Park, the first of its kind in the tri-state area. This state-of-the-art outdoor exercise court provides 28 different stations, where individual pieces of specialized exercise equipment are available targeting different areas of the body in a circuit training layout (11). All of the exercise stations can be modified to fit the user's ability, which is very important because many of the women in our demographic have little to no experience with these exercises. The courts are free for public use, but is only suitable for ages 14 and up. The fitness courts come with an app, Fitness Courts, which has 4.5 out of 5 stars, that you can download on your smartphone to help you get the most use out of the exercise court (16). On the app, you can locate a fitness court near you, watch fitness videos that show you how

to perform the moves in each station, have guided step-by-step coaching from expert trainers like celebrity trainer Robert Riches, and you can track your progress at each station (16). The app also has various timed circuit challenges that one can perform (16). This is a great resource for women in our demographic who are majority low income and cannot afford gym membership fees. Even though the women can access the courts for free, considering they are low income, if they do not have a smartphone, it will prevent them from having access to the app. Another beneficial aspect is that the playground is directly next to the courts. This makes it convenient for mothers to exercise while they watch their children on the playground because, as we will discuss later, child care is a barrier for lack of physical activity for the majority of these women.

In addition to the fitness courts, Buccleuch Park and Recreation Park also have a Parcourse Fit Circuit along the walking pathways. The stations along the path allow one to do exercises like pull-ups, sit-ups, tricep dips, leg raises, various stretches, and more. This is also another great free resource that allows one to perform upper and lower body exercises while completing a cardio workout.

The Fitness Courts and Parcourse Fit Circuit are great free resources for our demographic, so we decided to test and evaluate them ourselves. Unfortunately, when utilizing these fitness courts during various days and hours of the day, we noticed they were being used by no more than a handful of people and only by men. It's important to determine the reason why they aren't being utilized in general, but also why we have seen no women utilizing either of the exercise stations. As will be discussed in more detail in later pages, many of these women struggle with making the time for physical activity in between work, household responsibilities, and caring for their children; this could play a factor. Another reason could be the lack of

transportation to access these parks, which are located on the edges of town, whereas residents live more centrally (17).

The New Brunswick Recreation Center is a great community asset; it provides various physical activities for all ages. Residents seem to benefit from the center, giving it 4 out of 5 stars on Google reviews. One of the reviews translated from Spanish states, "Great gym membership, \$10/month. They have treadmills and weight training and open late. Employees are good people". The center provides a way for women to be physically active year round and the \$10 monthly membership fee is the lowest for fitness centers in the area. For women in our demographic, the recreation center provides a 6,000 square foot fitness center, a dance studio, a soccer arena and basketball courts (30). The recreation center also offers intramural sports teams, women can join the co-ed softball team, play weekly pick-up volleyball games or sign up for tennis lessons (30). There are also various activities and sports teams for children 5 and up to partake in, so this is an excellent alternative to finding childcare for mothers with children in this age group. The facility is indoors and is managed by The City of New Brunswick, making it a safe space for women to exercise and bring their children since safety is a big concern among women, resulting in them not going outside or utilizing some of the outdoor resources and even not letting their children outside. This was evident when we walked down Remsen Ave, Lee Ave, Livingston Ave, and the side streets. We saw less than a handful of women on the streets and there were no playgrounds or parks available to the public.

New Brunswick Tomorrow's initiative, Live Well-Vivir Bien, aims to promote a culture of health and wellness in New Brunswick. The campaign involves 145 community organizations and partnerships, including Rutgers University, Puerto Rican Action Board, Unity Square,

Johnson & Johnson, and Middlesex County Government Programs and Services, which provide over 222 health and wellness related activities and services (15). Live Well is available via a free mobile app, through the New Brunswick Tomorrow website, and Instagram. More importantly, it connects the residents to all of these organizations that they may not be aware exists. The app is available in both English and Spanish, provides residents with a calendar of events, a list of places to eat, move, and feel and be well, nutrition and exercise education, and a way to communicate with others in the community (15). Some of the events and resources many women in our demographic seem to utilize are the free Zumba classes, a free preschool program, free childcare, and “Turn It Up Tuesday” group fitness events at Robert Wood Johnson Fitness and Wellness Center (15). The best thing about this program is that even if you do not have a smartphone to access the app, you can still retrieve all of the information from their website.

Ciclovía is a free city-wide initiative in which streets are closed to cars and open for people to walk, bike, run, skate, and enjoy activities along the route throughout the city starting from The Yard on College Ave to the Recreation Center on Joyce Kilmer Ave. Ciclovía is one of the biggest events that takes place in New Brunswick and was attended by more than 15,000 residents in 2017 (31). Ciclovía has many sponsors, including Rutgers University, Robert Wood Johnson University Hospital, and Johnson & Johnson that aim to promote healthy active living. Fun Fit Zone, Health Zone and Get Fit Zone are some of the physical activity spots attendees can participate in along the route, more specifically activities like rock climbing, Zumba and various dancing and group fitness exercises (31). Although Ciclovía takes place only biannually, it is attended by many residents, making it a great way to raise awareness about the importance of physical activity. It also gives the many organizations in New Brunswick a way to promote the

resources they provide to residents regularly throughout the year. The benefit for residents to attend these community events is that they inspire physical activity in a social setting where the entire family can get together. This is important for the women because they are mostly the caretakers of the family and rarely take care of themselves. Events like Ciclovía introduce them to the many health and wellness resources available to them and organizations that provide childcare.

Mercado Esperanza, translated to “Market of Hope”, is one of the organizations that participates in Ciclovía. It is managed by local residents for local residents in partnership with Elijah’s Promise, New Brunswick Tomorrow, and coLAB Arts and funded by a Kresge Foundation FreshLo Grant and NJ Office of Faith Based Initiatives (32). Mercado Esperanza’s cultural aspect creates an inclusive and supportive environment for the large Latino population of New Brunswick and their mission of social equity works to connect various cultures. Among their many missions, they work to generate community impact by improving community health and providing easy access to city-wide health services. Some of the free regularly scheduled events they hold are group exercise classes like yoga and Zumba, health education seminars, and various kids activities. More of the Latino women in our demographic are likely to attend these events because of the inclusive cultural aspect. Many of them don’t speak English or may not be U.S. citizens, so coming to an organization where the leaders are their neighbors is comforting to them. With one of their missions being economic empowerment, they have the Promise Culinary School and offer entrepreneurial services (32). In the long run, this is an excellent way for women to become economically secure. They can have the means to pay for child care or for

membership to fitness centers and even to purchase a car, considering transportation is one of the many barriers preventing women the access and/or time to exercise.

According to our discussion with Manny Castaneda, an influential leader in the community and Director of Community Health for New Brunswick Tomorrow, and our research findings, we can conclude that religion and religious organizations play a bigger role and are a stronger influence on the community as compared to the government. A main theory as to why this is the case is because, as discussed earlier, the majority of New Brunswick's population is comprised of immigrants who may or may not be citizens and thus may not trust the government. Therefore, they are not as likely to accept help from the government, especially if they lack U.S. citizenship because they believe it can result in them being deported. This is why religion-based organizations have become key opinion leaders in the community. This is shown by one of the larger religious organizations, Catholic Charities Diocese of Metuchen. This charity alone has over twenty religious-based organizations within New Brunswick and surrounding areas that are available to not only our demographic, but all residents (28). These organizations are nonprofit and aim to help the community in one way or another. Among the many different types of aid that are easily accessible and of importance to our demographic are child care services, summer camps for children, counseling, shelters, parish social ministries, and general family events (28). Some of these services may not be specifically physical activity oriented, but they can help support and improve these women's overall health and wellness, which can lead to improvements in the amount of physical activity they perform in the long run.

Unity Square Community Center, an organization that is part of the Catholic Charities, is located in the heart of the community on Remsen Ave. Unity Square is led by community leaders

whose initiative is to empower the community and catalyze change in the poorest residential neighborhoods of New Brunswick. Some of their projects include a community garden, a bilingual Crime Watch to address and monitor the growing safety concerns, a city ordinance aimed at preventing wage theft, and in collaboration with Elijah's Promise, a training and employment project, Corazon Kitchen, for the members of the community (28). Resident-led organizations like, Unity Square, seem to be more effective. For example, a video clip of Unity Square showed a large gathering of residents at the center and participation at the community gardens. A resident also spoke about how the organization was able to help in a case of wage theft where they won \$10,000 (15). Though Unity Square does not specialize in promoting physical activity, it would benefit residents and be more effective if they did. However, their aim to provide a safe environment and prevent wage theft are factors that can make it easier for women to be more likely to engage in physical activity.

Lazos America Unida is an organization located on Livingston Ave that is led by a key leader in the community, Executive Director Teresa Vivar. She is an immigrant from Oaxaca, Mexico and a single mother of three; her experience is important and reassuring for other women in the community to see (34). Lazos is a nonprofit organization that focuses on representing the Mexican immigrant community and strengthening the bond between Hispanics and the rest of the community (27). Vivar started off by working closely with a former Rutgers professor, Anne C. Bellows, assisting with her community-based nutrition research. With Vivar's assistance, she successfully helped develop a community farming project in 2004 called the Marigold Project. The Marigold Project aims to promote economic development, job training and education to the Spanish speaking community (27). Under Vivar, Lazos has developed a health clinic, Zumba

classes, social and cultural events, legal assistance, and community organizing meetings (33).

Currently, Vivar is working on a campaign to get New Jersey to allow undocumented immigrants driving privileges, which could be an asset to ameliorating the transportation issue (33).

Mayor Cahill of New Brunswick is another leader of the community that advocates for the community's overall safety and wellness. During Cahill's term he has focused on improving and expanding parks and recreation and after school programs for the children; evidently, this will help mothers have more free time to spend on physical activity. As mentioned earlier, he has partnered with local organizations like Robert Wood Johnson University Hospital to develop a wellness program (10). This program takes place throughout the year with a calendar of events posted for each month for various exercise and health events for all ages (10). Other programs Mayor Cahill has supported are the Recreation Center and pedestrian safety improvements, such as flashing crosswalks near the schools and parks, curb extensions, and pylons to increase visibility at street corners (35).

Even with the plethora of available resources for women to utilize, there are several barriers to them getting any physical activity. These barriers include childcare, personal income, legal U.S citizenship, transportation, and safety. Childcare is the most accountable barrier for women in our demographic; 75% of women claim the reason they do not engage in physical activity is because they are busy caring for their children (19). According to the pilot study, "Barriers to physical activity experienced by low-income mothers of young children" by Dr. Palmer Keenan, the mothers of young children are less likely to spend time on physical activity due to the dependence of their children (19). Although there are 33 childcare centers in the city

of New Brunswick (21), only several of them are under the Head Start program from the United States Department of Health and Human Service, which provides free comprehensive early childhood education, health, nutrition, and parent involvement services to low-income children and their families (20). Another issue is the high cost of child care services and centers. Most of the child care centers in the city only enroll a maximum of 29-30 children, and are more costly than the larger child care centers that allow a maximum of up to 250 children (2). Additionally, many mothers, 71.2% according to the pilot study (19), do not trust others to watch their children for safety and environmental concerns, For example, reviews by parents for the Mae J. Strong Child Development Center showed that the center does not have a sanitary environment and the staff does not take good care of the children. One of the Google reviews stated, “Worst place to take your kids always bad smell and messy everywhere plus they don’t take good care of your children”.

Additionally, according to the pilot study, many women claim that the reason for their lack of physical activity is because they do not like to exercise, they are not motivated to exercise, they are already getting enough exercise, or that household responsibilities leave them no time to exercise (19). These are all barriers in which we can contribute towards ameliorating, which will be discussed in the following pages.

Moreover, personal income is a barrier as to why women do not engage in physical activities. The average gym membership in New Jersey costs between \$40 to \$50 a month, costing up to \$800 a year (23). The only accessible gyms for women who lack means of transportation is the Recreation Center and RWJ Fitness and Wellness Center, which charge fees of \$10/month and \$30/month, respectively. Based on the previous passage of New Brunswick

household income status, women between ages 18 to 34 make up the highest portion of women living below the poverty line (1). Thus, if they are already struggling to pay rent, buy groceries, and other necessities, the last thing they will shell out money for is a gym membership. Their income not only affects the means to pay for gym memberships, but also to pay for childcare services or a means of transportation.

In addition, a possible reason for some women not utilizing the physical activity services or child care services could be the issue of not having U.S citizenship. According to Data USA, New Brunswick residents have the lowest rates of U.S citizenship, 70.5%, which is much lower than that for Middlesex County, 84%, New Jersey, 90%, and the nation, 93% (22). Without U.S. citizenship, many women are not willing to provide their personal information to any government funded services for fear of being deported. Therefore, they do not have access to the free childcare and physical activity centers or any assistance the government may provide to low income individuals.

Another barrier women in our age group face is the lack of reliable transportation. Approximately 25% of New Brunswick residents do not own a car as compared to the national average, which is at 4.4%. This leaves them to rely on their own two feet, overpriced cabs, or public transportation. Although it is not uncommon for adults in New Brunswick to walk to work, it is less prevalent for our specific group as the women may fear for their safety. As we discovered from our discussion with Manny, women are also more likely to stay within a small section of their neighborhood. Additionally, the average commute time for New Brunswick residents is greater than the normal U.S. worker at around 25.9 minutes (4). Also, about 3.04% of New Brunswick has a “super commute” time in excess of 90 minutes (4). About an hour a day is

wasted simply on commuting to and from work. However, women hold many more responsibilities than just working. After a day working at a job that requires hard labor, they may have to catch a long and unreliable bus ride home. When they're home, their responsibilities are not finished; they have a household to take care of, which includes taking care of her children, cooking, cleaning, etc., so the last thing on her mind is exercise.

The next key barrier is the issue of safety. Many of these women may be hesitant to walk to work or the park, especially after dark. Keeping their children and themselves safe is paramount, and is valued over risking going to the park to exercise. Most parks have poor lighting and no safety phone towers in case of an emergency. Feaster Park is a prime example of why these women fear for the safety of themselves and their children. It is very hilly and this poses a clear issue. If they want to go for a jog around the park, they won't be able to keep an eye on their children playing due to the unlevelled field. Therefore, the mother may just sit down and watch her child play. If one were to look up the Google reviews for Feaster Park, they would be met with statements such as, 'ghetto', 'garbage and graffiti all over', and 'best park to smoke my crack rocks in'. If a mother were to see these reviews, I don't think a single one would be jumping at the chance to take her child there. In addition, Throop Avenue, which is directly adjacent to the park, has had a multitude of shootings, giving more reason as to why women may not utilize the park. Feaster is very central to the area we are assessing, so this being the main park in the area poses a clear issue. While it is great that there is a park in such a central location, it is not being utilized to its full potential due to the uneven landscape and safety issues.

If we had the money, we would take four key steps to help our group break down the barriers listed above to physical activity. Our first step would be to make exercise more

convenient. We would have regularly scheduled events where mom and child can be physically active together. Ciclovía is a great example and we plan on creating more similar events. Special events like these where the mother and children are brought together seem to be much more enjoyable for the participants and a more effective intervention overall. We would also plan events that occur at the same time and place. Utilizing a space for these events, such as the Unity Square Community Center, means that it is a central location accessible to everyone, not just the people who own vehicles. Since we stated that approximately 25% of our group does not have access to a car, it is key that we take this into consideration. One activity that is popular with our specific group is Zumba. Hosting weekly Zumba classes for free at the Unity Square Community Center would be optimal. Within the same center, there can be separate similar classes for the children geared more towards them. This then also takes care of the issue of childcare. Having events that are weekly are also more likely to foster accountability. If you know that a friend, family member, or neighbor is counting on you to show up weekly, you're more likely to go as it is human nature. Keeping each other motivated and accountable will help keep attendance for these events high.

The second step we would take is to provide more affordable daycare options. As aforementioned, finding reliable and affordable childcare is an everyday issue our group faces. Some centers are also particularly exclusive and only take in a small amount of children. To ameliorate this issue, we plan on partnering with the many local churches in the area and community centers, like Unity Square, to expand affordable childcare options. There is also the issue of children being too young to be accepted by traditional daycares and those below two years old are often not permitted. We plan on partnering with local hospitals, St. Peter's

University Hospital and Robert Wood Johnson University Hospital, to provide reliable infant care for these children who are too young to participate in daycare. Locations such as churches and hospitals also provide a safe and clean environment for the children, which many of the current childcare centers lack.

The third step we choose to take is installing more exercise equipment. As we mentioned, fitness courts were recently added to Buccleuch Park and Alice Jennings Archibald Park. These courts seem to be well received. However, they seem to be predominantly used by men. Women in our group may not know how to utilize them or may feel uncomfortable working out around solely men. To help change this, we can partner up with the New Brunswick Recreation Center to offer free weekly classes for only women at these parks to show them how to use the equipment. Women will then be more likely to go back on their own and work out at these courts if they are empowered on how to use them.

Our final step includes making the parks in New Brunswick more secure and safe. Better lighting is necessary at all parks so these women will not be afraid to be in the park anytime after the sun goes down. Surveillance cameras should also be a priority at high risk parks such as Feaster Park. In addition, emergency telephone towers should be located periodically throughout the parks in case of immediate danger. In addition, volunteers can also be used to patrol the parks. Unity Square Community Center started the first neighborhood Crime Watch Program in New Brunswick. We plan on taking volunteers who are already patrolling and placing them at the parks where they are desperately needed. We also plan on partnering with Rutgers University where students who are interested in becoming police officers can patrol these areas and in return use it as experience similar to an internship or receive credits towards their degree.

To sum up our community assessment, physical activity for women ages 20-35 with children living in New Brunswick can be an exceptional challenge. This is due to a multitude of key roadblocks such as, lack of transportation, lack of reliable child care, cultural barriers, and financial issues. We plan on ameliorating these barriers by providing affordable childcare options, hosting a variety of free physical activity related events in central locations, installing more exercise equipment, and increasing safety for local parks. Our utmost priority is to foster higher rates of physical activity in our age group all while taking into account cultural sensitivity.

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