

# Hypothesis Testing Analysis

## Hypotheses

1. Most families in North America have a hard time planning activities together as the burden of responsibility usually falls on the same people.
2. Most families in North America have some limited resources that they need to share among individual members of the family.
3. Most families in North America have conflicts with their individual schedules when trying to coordinate activities among themselves.
4. Most individuals within families in North America have trouble keeping up-to-date on relevant family news despite wanting to do so.
5. Current tools such as Cozi, Google Calendar, sticky notes on the fridge, etc. do not help families coordinate resources among themselves.

## Demographics

Interviewee	Information
P1 (Busy parent)	<ul style="list-style-type: none"><li>● Mother with 2 daughters</li><li>● Age: 51</li><li>● Gender: Female</li><li>● Race: East Asian</li><li>● Location: Richmond Hill, ON</li><li>● Education: Bachelor of Commerce</li><li>● Been working for over 30 years as a travel advisor and fitness trainer</li></ul>
P2 (Busy parent)	<ul style="list-style-type: none"><li>● Mother of 3 children (2 boys, 1 girl)</li><li>● Age: 52</li><li>● Gender: Female</li><li>● Race: South Asian</li><li>● Location: Scarborough, ON</li><li>● Education: High School</li><li>● Has been working as an administrative assistant at an insurance firm for several years</li></ul>
P3 (Busy parent)	<ul style="list-style-type: none"><li>● Mother with 2 sons</li><li>● Age: 50</li><li>● Gender: Female</li><li>● Race: East Asian</li><li>● Location: North York</li><li>● Education: Nursing</li></ul>

	<ul style="list-style-type: none"> <li>• Working as a nurse at a senior home</li> </ul>
P4 (Young adult)	<ul style="list-style-type: none"> <li>• University student with separated parents and a brother</li> <li>• Age: 21</li> <li>• Gender: Female</li> <li>• Race: East Asian</li> <li>• Location: Vancouver, BC</li> <li>• Education: Completing a Bachelor of Kinesiology</li> <li>• Often volunteers and works part-time jobs while studying</li> </ul>
P5 (Young adult)	<ul style="list-style-type: none"> <li>• University student with working parents</li> <li>• Age: 21</li> <li>• Gender: Female</li> <li>• Race: East Asian</li> <li>• Location: Oakville, ON</li> <li>• Education: Completing a Bachelor of Mathematics</li> <li>• Has a full-time co-op position at the University of Waterloo which requires her to commute once a week</li> </ul>

## Results

We interviewed three busy parents and two young adults to test our hypotheses.

<b>Hypothesis 1:</b> Families in North America have a hard time planning activities together as the burden of responsibility usually falls on the same people each time.	
Question	Responses
<b>Q1:</b> Which family members take the responsibility for planning a scheduled family activity?	<ul style="list-style-type: none"> <li>• 4 out of 5 answered that either Mom or Dad do the planning.</li> <li>• 1 out of 5 answered both parents and children do the planning.</li> </ul>
<b>Q2:</b> What responsibilities do these family members typically have?	<ul style="list-style-type: none"> <li>• 3 out of 5 answered that they handle a breadth of tasks including inviting people and guests, figuring out everyone's availability, delegating tasks, setting or cleaning up, and making bookings/payments.</li> <li>• 1 out of 5 answered that they remind everyone to bring their allocated items.</li> <li>• 1 out of 5 answered making bookings and reminding parents of responsibilities.</li> </ul>

<p><b>Q3:</b> What are the pain points with determining responsibilities for a scheduled family activity?</p>	<ul style="list-style-type: none"> <li>● 3 out of 5 answered miscommunication or lack of communication between family members regarding planning or scheduling.</li> <li>● 1 out of 5 answered gauging attendance and catering to everyone's needs, i.e. food restrictions.</li> <li>● 1 out of 5 answered determining what these responsibilities actually are for an event.</li> </ul>
<p><b>Result:</b> Hypothesis is validated.</p> <p>4 out of 5 interviewees responded that at least one of the parents plan the family activities and no other family members are involved. The majority of the interviewees answered that the parents take the burden when planning activities and there are pain points regarding miscommunication that comes up during this process.</p>	
<p><b>Hypothesis 2:</b> Families in North America have some limited resources that they need to share among individual members of the family.</p>	
<p><b>Questions</b></p>	<p><b>Responses</b></p>
<p><b>Q1-1:</b> Does your family need to share resources?</p>	<ul style="list-style-type: none"> <li>● 5 out of 5 answered they need to share resources.</li> </ul>
<p><b>Q1-2:</b> Why?</p>	<ul style="list-style-type: none"> <li>● 4 out of 5 answered that resources are limited and that it is too expensive to buy more resources for everybody.</li> <li>● 1 out of 5 answered that these resources are public family items that are used by multiple family members.</li> </ul>
<p><b>Q1-2:</b> Why not?</p>	<ul style="list-style-type: none"> <li>● Not applicable.</li> </ul>
<p><b>Q2:</b> What are some resources shared among your family members?</p>	<ul style="list-style-type: none"> <li>● 5 out of 5 answered they share a car among multiple family members.</li> <li>● 2 out of 5 answered the television and food.</li> <li>● 1 out of 5 answered house keys.</li> <li>● 1 out of 5 answered Netflix, hairdryer, and toiletries.</li> <li>● 1 out of 5 answered the laptop.</li> </ul>

<p><b>Q3:</b> What are the pain points you and your family experience when coordinating resources, if any?</p>	<ul style="list-style-type: none"> <li>● 4 out of 5 answered scheduling conflicts including the following: <ul style="list-style-type: none"> <li>○ 3 out of 4 answered that someone uses a resource without notifying the rest of the family or does not notify them with enough time to plan the usage ahead of time.</li> <li>○ 1 out of 4 answered that someone schedules a day to use a resource but was not actually using it when somebody else needed it.</li> </ul> </li> <li>● 1 out of 5 answered that verbal agreements are hard to keep track of.</li> </ul>
<p><b>Q4:</b> If your family does share resources, do you have alternative ways for all members to use the resources they require without having to share?</p>	<ul style="list-style-type: none"> <li>● 2 out of 5 answered buying more resources such as televisions or bicycles.</li> <li>● 2 out of 5 answered using alternatives such as using an iPad instead of a television, taking transit instead of the car, and using a different room that is not occupied.</li> <li>● 1 out of 5 answered replacing resources with ones that are less shared.</li> </ul>
<p><b>Results:</b> Hypothesis is validated.</p> <p>5 out of 5 interviewees responded that they share resources, and 4 out of 5 of them answered that the reason is because buying more resources is too expensive. The majority of the interviewees did not agree on a suitable alternative method to avoid having to share current resources.</p>	
<p><b>Hypotheses 3:</b> Families in North America have conflicts with their individual schedules when trying to coordinate activities among themselves.</p>	
<p><b>Question</b></p>	<p><b>Responses</b></p>
<p><b>Q1:</b> How would you schedule a family activity?</p>	<ul style="list-style-type: none"> <li>● In terms of channels of communication: <ul style="list-style-type: none"> <li>○ 4 out of 5 answered that they have verbal discussions about people's availability for the activity.</li> <li>○ 1 out 5 answered that they text about plans in a family group chat.</li> </ul> </li> <li>● In terms of scheduling: <ul style="list-style-type: none"> <li>○ 4 out of 5 answered that they plan for activities beforehand.</li> <li>○ 1 out of 5 answered that they notify family members about a predetermined time and place to see who is available.</li> </ul> </li> </ul>

<p><b>Q2:</b> What are the pain points found in scheduling activities with your family, if any?</p>	<ul style="list-style-type: none"> <li>● 2 out of 5 answered last-minute scheduling or change of plans.</li> <li>● 2 out of 5 answered that it is difficult to keep everyone updated on family activities as some members do not pay attention and tend to forget about them.</li> <li>● 1 out of 5 answered that people simply do not want to attend some activities.</li> </ul>
<p><b>Q3:</b> In what ways do you solve scheduling conflicts among individual members of your family?</p>	<ul style="list-style-type: none"> <li>● 3 out of 5 answered that they would replan or cancel the activity based on future schedules.</li> <li>● 1 out of 5 answered that everyone has to compromise or continue the activity without the family members who are unavailable.</li> <li>● 1 out of 5 answered that certain events are a must so everyone knows to plan around it.</li> </ul>
<p><b>Results:</b> Hypothesis is validated.</p> <p>All interviewees listed multiple pain points in having to schedule family activities. Furthermore, some of these pain points were common among some of the interviewees. For example, 2 out of 5 people answered that last-minute planning is a pain point, and another 2 out of 5 answered that people do not pay attention or forget that certain activities are happening.</p>	
<p><b>Hypothesis 4:</b> Individuals within families in North America have trouble keeping up-to-date on relevant family news despite wanting to do so.</p>	
<p><b>Question</b></p>	<p><b>Responses</b></p>
<p><b>Q1:</b> Do you try to keep up-to-date with family news?</p>	<ul style="list-style-type: none"> <li>● 1 out of 5 answered no.</li> <li>● 4 out of 5 answered yes.</li> </ul>
<p><b>Q1-1:</b> If you do, what are the methods you use to stay up-to-date? Are you satisfied with current methods of staying up-to-date? Please explain.</p>	<ul style="list-style-type: none"> <li>● 4 out of 5 (those who answered yes to Q1-1) use video chat applications to communicate online when the family members live apart and talk face-to-face when the family members are in the same household.</li> <li>● 4 out of 5 (those who answered yes to Q1-1) answered that they are not entirely satisfied and there is room to improve for the family to stay up-to-date because of: <ul style="list-style-type: none"> <li>○ Big generational gaps that make it hard to find common conversation topics</li> </ul> </li> </ul>

	<ul style="list-style-type: none"> <li>○ Difficulty to initiate deeper conversations</li> <li>○ Difficulty to find a common time slot to chat</li> <li>○ Not using a common platform to communicate</li> </ul>
<p><b>Q1-2:</b> If you do not, would you like to keep up-to-date?</p> <ul style="list-style-type: none"> <li>● Yes</li> <li>● No</li> <li>● No preference</li> </ul>	<ul style="list-style-type: none"> <li>● 1 out of 5 (those who answered no to Q1-1) selected 'No preference'.</li> </ul>
<p><b>Results:</b> Hypothesis is validated.</p> <p>None of the interviewees express unwillingness to keep up-to-date on relevant family news. All of the interviewees who try to keep up-to-date on family news currently face challenges when doing so.</p>	
<p><b>Hypothesis 5:</b> Current tools such as Cozi, Google Calendar, sticky notes on the fridge, etc. do not help families coordinate resources among themselves.</p>	
Question	Responses
<p><b>Q1:</b> What methods do you currently use to decide the sharing of resources among family members?</p>	<ul style="list-style-type: none"> <li>● 3 out of 5 answered no agreement on a specific method.</li> <li>● 1 out of 5 answered the first-come-first-serve method.</li> <li>● 1 out of 5 answered that they try to gauge everyone's usage time.</li> </ul>
<p><b>Q2:</b> What tools do you currently use to share resources among family members?</p>	<ul style="list-style-type: none"> <li>● In terms of communication: <ul style="list-style-type: none"> <li>○ 4 out of 5 answered verbally telling family members what they will use for a certain time duration.</li> <li>○ 1 out of 5 answered texting.</li> </ul> </li> <li>● In terms of methods: <ul style="list-style-type: none"> <li>○ 2 out of 5 answered using a calendar.</li> <li>○ 2 out of 5 answered using sticky notes to indicate usage.</li> <li>○ 1 out of 5 answered first come, first serve scheduling.</li> </ul> </li> </ul>
<p><b>Q3:</b> What do you like or dislike about your current methods or tools of sharing resources with your family?</p>	<ul style="list-style-type: none"> <li>● 2 out of 5 answered that there is nothing to dislike because the current methods or tools work well.</li> <li>● 3 out of 5 answered that they have more dislikes than likes because: <ul style="list-style-type: none"> <li>○ They make too many assumptions when gauging other family members' usage time.</li> <li>○ They have to constantly remind each other</li> </ul> </li> </ul>

	<p>of when it is appropriate for them to use a certain resource.</p> <ul style="list-style-type: none"><li>○ Other family members ignore text messages or sticky notes.</li><li>○ Other family members give no notice or short notice on using the resources.</li></ul>
<p><b>Results:</b> Hypothesis is validated.</p> <p>3 out of 5 interviewees, which is the majority, answered that they have more dislikes than likes for their current methods or tools for sharing resources.</p>	