Will offering Soft Picks as an alternative to flossing increase compliance of interdental cleaning in non-flossers?

By Nadine Russell, RDH

O’Hehir University

Class 3C-15
ABSTRACT

Objective: The aim of this project was to find out if a group of non-flossers will improve compliance of interdental cleaning when offered the flossing alternative Soft Picks by GUM.

Methodology: Fifteen individuals were approached to discuss suitability and willingness to participate in this Action Research project. After screening all fifteen, eleven participants were considered appropriate and consented to participate in the project. Participants were provided with adequate samples of Soft Picks and intraoral instructions were provided. To ensure an adequate technique, all participants demonstrated the proper use of Soft Picks, and techniques were modified as needed. Participants were asked to use the Soft Picks for seven to ten days and follow up questions were asked to measure compliance and participant satisfaction with Soft Picks as an oral health tool. Motivational Interviewing techniques were used to encourage participation and compliance.

Results: Most participants were compliant and used the Soft Picks. The average use was 5 of 7 days; a significant improvement for those who cleaned interdentally one time per week or less. Female participants were more complaint than male participants; adults more complaint than teens. On a scale of 1-5, the overall satisfaction of use Soft Picks was rated 4; the likelihood of continued use was rated 3.5. 91% of participants stated that their mouths felt cleaner and liked how Soft Picks made their mouths feel. 91% liked the ease of use with Soft Picks and 82% liked the convenience and portability of the product.
Conclusion: Soft Picks are an effective tool to increase interdental cleaning in non-compliant flossers.

Introduction:

I first started working in the dental profession almost nineteen years ago. At that time in Ontario, requirements for admission to a dental hygiene program were that candidates needed to have completed a dental assisting diploma and have worked as an assistant for at least one year prior to application. For this reason, I started off as a chairside dental assistant. I have to admit, I did not like it! I found myself moving more towards the business and administrative roles within the dental office and quite enjoyed working the front desk, treatment coordination and eventually office management. Somehow, I never applied to go back to do the hygiene programme as originally planned. It was not until my daughter was starting pre-school and I had some extra time on my hands, that I decided I should finish what I started. I obtained my diploma in Dental Hygiene in 2005. It was definitely worth the extra hard work and efforts it took to attend school full time while raising a family! I love being a hygienist! It has opened up so many doors for me in my career that I would not have dreamt to be imaginable. I now work for an educational facility for dental hygienists, rdhu. At rdhu, we encompass and help facilitate anything dental hygiene related. I combine all my experiences as an assistant, administrator, manager and hygienist as I work primarily as a practice management advisor; while practicing clinical hygiene on a part time basis. I work closely with the hygienists in the offices I advise, offering coaching and mentorship to the hygiene team. I try to encourage them and help them learn how to engage their
patients. Over the almost two decades of working with patients, there has always been one commonly occurring question for me: Why is it that so many people do not floss?!

**Background:**

Flossing! It is simple. It is readily available, inexpensive and an effective interdental cleaning tool. It takes a minute to floss the entire dentition yet, as hygienists we all have a similar experience: it is so difficult to get our patients to floss! Research shows that “flossing is an effective adjunct to toothbrushing” that reduces the incidence of plaque induced dental disease (Sambunjak, 2011). Interestingly, other studies show that “professional flossing…is highly effective in reducing interproximal caries” but that “these findings should be extrapolated to more typical floss-users with care, since self-flossing has failed to show an effect” (Hujoel, 2009). So, even those who do floss, have an inadequate technique.

Over the years, patients have given varied reasons as to why they do not floss: such as: difficulty incorporating into daily routines, having difficulty with technique, they do not like putting their fingers in their mouth, stimulating the gag reflex, thinking that brushing is enough, and my all-time favourite “I do not have the time”. Often people do have a sensitive gag reflex making brushing, let alone flossing difficult. People often have dexterity issues making adequate flossing difficult to achieve.

As hygienists, we understand the challenges our patients experience incorporating daily flossing into ones routine. When they have never flossed a day in their life, how do we motivate change? The challenge for us is not only encouraging
behaviour change for our patients, but looking at how we can change how we offer information to our patients (Ramseier, 2010).

We have told our patients time and time again the importance of flossing, so why do we keep offering floss? As hygienists, many of us are stuck on flossing as a preferred method of interdental cleaning. Interdental cleaning reduces the incidence of interproximal caries and periodontal diseases. Ultimately, our goal for our patients is to reduce dental disease. Once we have identified the needs of our patients it is prudent for us to offer an alternative method to improve their oral health.

I wanted to have a cost effective alternative to flossing to offer participants of my Action Research Project. There are many other aids that can be offered but ultimately I wanted one alternative that people will likely to continue to use on their own, so a cost effective alternative was also necessary. My preferred choice of an alternate interdental cleaning tool is Soft Picks by GUM. Not only are they relatively inexpensive, they have many other advantages: portability, convenience, and ease of use.

By using action research framework (McNiff, 2011), I ask: Will offering Soft Picks as an alternative to flossing increase compliance of interdental cleaning in non-flossers?

Soft Picks are made up of seventy-six soft latex-free rubber bristles. Wire-free, they are safe for use around crowns, bridges, implants and orthodontics. Not only do they remove plaque and debris, they massage and stimulate the gums. Their tapered design makes them adaptable for varying embrasure spaces. Additionally, there is also a Soft Pick made for wider spaces that is 25% wider than the original Soft Pick (Sunstar,
2009). I had always felt that Soft Picks were a great tool, but had never felt that they were as effective as flossing. While researching Soft Picks further, I was pleasantly surprised that they were far more effective than I had thought. Please see table below:

**Interdental brushes, Soft-Picks®, and one-handed flossers are as effective as string floss at removing plaque between the teeth.***

<table>
<thead>
<tr>
<th></th>
<th>String Floss</th>
<th>Flosser</th>
<th>Go-Betweens®</th>
<th>Soft-Picks®</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Plaque Reduction</strong></td>
<td>16</td>
<td>24</td>
<td>20</td>
<td>17</td>
</tr>
<tr>
<td><strong>Gingivitis Reduction</strong> (lingual change)</td>
<td>27</td>
<td>27</td>
<td>36</td>
<td>32</td>
</tr>
<tr>
<td><strong>Gingival Bleeding Reduction</strong></td>
<td>62</td>
<td>56</td>
<td>78</td>
<td>67</td>
</tr>
</tbody>
</table>

**Clinical Study:** 120 Subjects assessed for Plaque, Gingivitis and Eastman Interdental Bleeding Indices (EIBI) (Sunstar, 2009)

**Methodology:**

I do not have regular clinical hygiene days. I usually fill-in for friends as needed as well as practice part time in an independent dental hygiene practice. The majority of my own patient base have special needs and would be unable to participate in this study. The remainder of my patients I schedule to maximize my
office time and tend to schedule long days only once every four to six weeks. This time frame would not allow me to conduct my research using these patients. For these reasons I had initially considered recruiting the assistance of a few dental hygienists to help compile data. After careful consideration, I decided that this could complicate the outcomes of my research; I felt it would create too many variables to ensure that I obtained accurate data within the specified time frame. I decided that I would ask my family and friends if they would be willing to participate in my project with me. I set out to ask fifteen people in hopes to get at least ten to agree to participate. I felt this would give me sufficient background data to answer my question. Of the chosen participants I had to seek out non-flossers; those who flossed less than once per week.

My questions to them were:

1. How often do you floss your teeth? If they met my criteria of flossing less than once per week we would then proceed.

2. Are you willing to participate in my research project? I assured all participants that my manner of compiling the data would keep all personal information confidential. Verbal and written consent were obtained from each participant.

3. I verbally discussed medical history. I did not want any potential oral health issues to be misconstrued due to participation in my research project. For the sake of professional liabilities, I only wanted those without systemic illness or on any type of anti-coagulant therapies.
Of the fifteen people I approached, only eleven were included in my project. One of the people I approached had ongoing health concerns that I did not want to include. Two people flossed more than twice per week and the last person said they were not interested in participating. I was pleasantly surprised that eleven were actually willing to participate and attempt to clean interdentally for seven to ten days. Unfortunately, I was not surprised that only 13% of the people I had approached flossed more than twice per week.

I purchased an adequate amount of samples of Soft Picks for each participant to use. I gave verbal instructions and demonstrated accurate technique for use. To ensure an adequate technique, I asked participants to demonstrate back to me and I would modify their technique as needed. I asked if they would use these every day for the next week and that I would follow up with them within the next seven to ten days to see how successful they were. I asked participants to keep a mental note of any differences in their mouth with the use of the Soft Picks for the duration of the week. I told them I would ask them these questions after their trial period and wanted them to be prepared to answer.

This is what I asked on my follow up questionnaire:

1. How many days have you used the Soft Picks?
   
   _____ out of 7 days

2. How would you rate your overall experience using Soft Picks? Please circle:

   1-Dissatisfied   2-Fair   3-Good   4- Very Good   5-Excellent
3. How likely are you to continue using Soft Picks as an interdental cleaner?
   Please circle: 1-Will not use  2-Maybe will use
   3-Sometimes will use  4-Will Probably Use  5-Will Definitely use

4. What differences, if any, have you have noticed in your mouth with using the Soft Picks? Check all that apply:
   □ Fresher Breath  □ Improvement in gums (less bleeding)
   □ Mouth Felt Cleaner  □ No changes noticed

5. What did you like best about using Soft Picks? Check all that apply:
   □ Easy to use  □ Convenience/portability
   □ How they made my mouth feel  □ I didn’t like them

Gathering and Interpreting Data and Generating Evidence

I attempted follow up with all participants after seven days; I had difficulty reaching two of the participants past ten days. Once I did finally get in contact with them, both had told me that they were not compliant with their participation. Using some motivational interviewing and open ended questions, I was able to get them to agree to try again. I assured them that they had agreed to participate in this project to
help them achieve a change in their oral health behaviours. They needed to not feel “guilty” for not using the Soft Picks everyday but to do the best they could. I wanted them to do it for their benefit, not mine! After an additional seven days, I followed up with them and had my data compiled.

<table>
<thead>
<tr>
<th>Participant</th>
<th>Age</th>
<th>Sex</th>
<th>Days Used</th>
<th>Overall Experience</th>
<th>Continued use</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>40</td>
<td>M</td>
<td>5/7</td>
<td>5</td>
<td>4</td>
</tr>
<tr>
<td>2</td>
<td>42</td>
<td>M</td>
<td>4/7</td>
<td>4</td>
<td>3</td>
</tr>
<tr>
<td>3</td>
<td>30</td>
<td>F</td>
<td>7/7</td>
<td>5</td>
<td>5</td>
</tr>
<tr>
<td>4</td>
<td>53</td>
<td>F</td>
<td>6/7</td>
<td>5</td>
<td>4</td>
</tr>
<tr>
<td>5</td>
<td>15</td>
<td>F</td>
<td>4/7</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>6</td>
<td>18</td>
<td>F</td>
<td>6/7</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>7</td>
<td>17</td>
<td>F</td>
<td>5/7</td>
<td>4</td>
<td>3</td>
</tr>
<tr>
<td>8</td>
<td>39</td>
<td>M</td>
<td>2/7</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>9</td>
<td>40</td>
<td>F</td>
<td>6/7</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>10</td>
<td>43</td>
<td>F</td>
<td>7/7</td>
<td>5</td>
<td>5</td>
</tr>
<tr>
<td>11</td>
<td>35</td>
<td>M</td>
<td>1/7</td>
<td>1</td>
<td>1</td>
</tr>
</tbody>
</table>
What are some of the differences you noticed in your mouth?

<table>
<thead>
<tr>
<th></th>
<th># of participants</th>
<th>% of participants</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fresher Breath</td>
<td>7/11</td>
<td>64%</td>
</tr>
<tr>
<td>Improvement in gums (less bleeding)</td>
<td>2/11</td>
<td>18%</td>
</tr>
<tr>
<td>Mouth felt cleaner</td>
<td>10/11</td>
<td>91%</td>
</tr>
<tr>
<td>No changes noticed</td>
<td>1/11</td>
<td>9%</td>
</tr>
</tbody>
</table>

What did you like best about using Soft Picks?

<table>
<thead>
<tr>
<th></th>
<th># of participants</th>
<th>% of participants</th>
</tr>
</thead>
<tbody>
<tr>
<td>Easy to use</td>
<td>10/11</td>
<td>91%</td>
</tr>
<tr>
<td>Convenience/Portability</td>
<td>9/11</td>
<td>82%</td>
</tr>
<tr>
<td>How they made my mouth feel</td>
<td>9/11</td>
<td>91%</td>
</tr>
<tr>
<td>I didn’t like them</td>
<td>1/11</td>
<td>9%</td>
</tr>
</tbody>
</table>

Main Findings/Results

Upon reviewing the data collected, I was pleased to see that so many of the participants were compliant with the oral health instructions given. Of those who did
comply, they reported a positive experience. They not only saw the benefit in using the Soft Picks, but that they would likely continue to use them. Another interesting observation was that the female participants were much more compliant with using the Soft Picks than the male participants. However, the teenage participants although all female, were less compliant than the adult female participants. Overall, all participants, with the exception of one, did attempt to make changes to their daily oral health habits.

The two participants who were not initially compliant was a point of my project that I had not planned for. I had thought just to execute my plan and compile data; if they were non-compliant then I would simply incorporate that data in my report. When I had started the conversation with the two participants, I found myself relying on my developing Motivational Interviewing skills to work with them. It was a valuable learning experience for me; it gave me the opportunity within the framework of my project to reinforce the previous instructions and to further develop my Motivational Interviewing skills to help facilitate a change in behaviour. The impact of using such interventions can improve adherence to oral hygiene instructions (Renz, 2008); however, we usually do not get the opportunity in traditional practice to measure the outcomes of interventions used within a seven to ten day period.

I found myself re-thinking whether or not I should have continued to work with the one male participant who was non-compliant. He frustrated me. He seemed to have agreed to it only because I asked and perhaps he felt he had to. But he is the one I feel I learned from the most! He is the “typical” patient we see every day in our practices! The one who just agrees with what we are saying, then forgets everything that we have said by the time they get to their car. His input to the project was perhaps the most
valuable. I still need to work on developing my skills to be able to work with the more challenging patients. I have yet to discover what his motivator is. Perhaps, if given more opportunities, I will be able to help him.

I would consider this a very successful action research project, in that, so many of the approached participants made attempt towards a positive behaviour change. The results were so favourable, I questioned why? When I was practicing clinical hygiene full time, I would never see successful outcomes such as these. Reflecting on this, I wondered?

1. Is it my changed approach to offering oral hygiene solutions? I am using MI and opened ended question to help facilitate behaviour change.

2. Is it the specifically targeted group I approached? I only asked those that I thought would benefit from the intervention, and those who would likely participate and be compliant.

3. Are my participants being forthcoming with their results or are they telling me only what I want to hear? After all, 27% of patients lie to their dentist about flossing (AAP, 2015).

I would be interested in seeing how many of the participants actually make a lasting health behaviour change. I think this would be good to a good measure to evaluate at subsequent hygiene appointments where patients can actually see their long term achievements and the overall improvement to their oral health.
Business Aspect

From a personal business aspect, I can see the benefits of this project. From a management and coaching perspective, this has helped me learn transferable information that I can personally use and incorporate into plans when working with hygiene teams.

From an overall business and management perspective, I think information that I have gathered is exactly what companies like the makers of Soft Picks look for. “Dentistry is a business, and dental hygienists are its most valued assets” (Clark, 2015). An online survey completed by Sunstar Butler showed that 81% of patients go on to purchase products recommended by their dental hygienist (Foppe 2009). Feedback from other dental hygienists could certainly guide their business to further developing other interdental aids.

Conclusion

The results of my Action Research were undoubtedly conclusive: offering Soft Picks as an alternative to non-flossers DOES increase compliance of interdental cleaning. I have come to realize that “flossing is not the be-all and end-all” of interdental cleaning (Morrissey, 2014). While flossing may be the “gold standard” for us, as hygienists, we need to help our patients find a suitable alternative when they are not as passionate about flossing as we are. Ultimately, our goal is to guide our patients to optimal oral health; so we need to listen and offer viable solutions.
Bibliography


