

GRIN GRANT PROGRAM EVALUATION: FINAL REPORT *(ABBREVIATED)*

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PUBLISHED FEBRUARY 2025



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BUILDING RECOVERY ECOSYSTEMS



Grin Grant Inc., established in 2021, is a unique dental restoration and recovery program for individuals with substance use disorders that incorporates peer support activities in addition to dental restoration care. Grin Grant is comprised of three main components including dental restoration, cognitive behavioral support through A.P.P.E.A.R. group meetings, and career and life skills development through workplace mentoring. Altogether, the program provides holistic social and dental support to individuals in their recovery. This report provides results from a comprehensive evaluation of Grin Grant occurring between April 2022 and January 2025.

Quantitative Data Collected: Surveys were delivered at program intake and 3-months, 6-months, 1-year, and 1.5-years post-restoration. These surveys measured a variety of indicators including recovery capital, general anxiety and depression, self-esteem, social and dental anxiety, employment and income, housing status, and substance use. At the conclusion of the evaluation, 126 participants had completed the intake survey, 41 participants had completed the 3-month post-restoration survey, 34 had completed the 6-month post-restoration survey, and 17 had completed the 1-year and 1.5-year post-restoration surveys. Additionally, a survey was delivered once a month at the A.P.P.E.A.R. group meetings to determine group therapeutic alliance.

Qualitative Data Collected: Qualitative data was collected in the dental impact surveys and the A.P.P.E.A.R. group surveys. Specifically, participants were asked open-ended questions about their engagement in the recovery community, how their dental restoration had impacted their recovery and relationships, and how the A.P.P.E.A.R. program had helped them.

Key Findings

Baseline Impact: Results indicate that Grin Grant program participants experienced significant consequences due to their oral health before their restoration. Most participants noted impacts related to employment, confidence, physical discomfort and pain, and negative social interactions. Additionally, participants reported high levels of dental anxiety at intake, with approximately 38% of participants meeting the criteria for high levels of dental anxiety at intake.

Effects of Restoration: Examination of the impact of dental restoration itself showed that dental restoration was associated with significant reductions in general anxiety, social anxiety, and dental anxiety when controlling for individual characteristics and time effects.

Recovery and Relationships: Qualitative analysis of data regarding how dental restoration impacted participants' recovery and personal relationships revealed impacts related to self confidence and self-esteem. Participants noted an increased ability to speak in public and the ability to apply for better and different job opportunities. Additionally, when asked how their dental restoration impacted family and personal relationships, participants indicated improvements in relationships with children, greater willingness to engage in family activities, and being more likely to take pictures and smile in them. Participants also remarked that they were more engaged in their recovery communities and service due to their dental restoration.

Impact of A.P.P.E.A.R.: An analysis of the A.P.P.E.A.R. group meetings revealed that the program is valuable to Grin Grant participants as they go through the dental restoration process. Qualitative data revealed common themes around the need for support from others who have gone through the process as well as the value of the fellowship that exists within the program.

INTRODUCTION

Substance use disorders (SUDs) are a prevalent public health issue with the latest estimates suggesting that over 48 million Americans ages 12 and older met the criteria for a SUD in 2023.¹ SUD has far reaching impacts on individuals mental and physical health^{2,3}, family and social relationships⁴, and economic productivity.⁵ Often, substance use is associated with significant oral health problems. In a systematic review of 38 studies examining the oral health problems of people who use drugs, Baghaie and colleagues found that people who use drugs have elevated rates of oral health problems like decayed and missing teeth and periodontitis.⁶ Despite the high prevalence of oral health issues for those with SUDs, many SUD treatment programs do not include oral healthcare as part of treatment plans.^{7,8}

Little research has been done to examine the impact of oral care on improving SUD treatment outcomes. One study examined how comprehensive oral care in conjunction with SUD care affected treatment outcomes.⁹ The study found that those who received oral health care had higher rates of treatment completion, increased length of stay, increased rates of employment, and abstinence. In a recent examination of oral and mental health research for those with SUDs, Vadrevu and co-authors called for additional research on the impact of oral and mental health on SUD treatment outcomes.⁷

Grin Grant, established in 2021, is a unique dental restoration program for individuals with SUDs in rural and non-rural Kentucky counties that incorporates peer support activities in addition to dental restoration care.¹⁰ Grin Grant is comprised of three main components including dental restoration, cognitive behavioral support through A.P.P.E.A.R. group meetings, and career and life skills development through workplace mentoring. The A.P.P.E.A.R. program, which stands for Anticipation of the procedure, Patience during the process, Planning for discomfort, Expectations before and after, Actualization of self, and Re-socialization, is provided to participants pre- and post-restoration. Altogether, the program provides holistic social and dental support to individuals in their recovery. Eligibility for Grin Grant includes having severe oral damage including missing and/or decayed teeth and having at least one year in recovery.

In this report, we provide results from a comprehensive program evaluation conducted between April 27, 2022, and January 1, 2025. Specifically, we examine the types of individuals served by Grin Grant, baseline dental impacts and recovery indicators, and changes in key outcomes related to mental health, recovery capital, and self-esteem post-restoration.

METHODS

To examine the impact of dental restoration, the Fletcher Group partnered with Grin Grant to conduct a comprehensive program evaluation. As a significant proportion of Grin Grant participants are from rural counties in Kentucky, this program represents a needed intervention for rural individuals with SUD. The program evaluation consisted of repeated surveys of Grin Grant program participants. Data collection to support the evaluation occurred between April 2022 and January 2025.

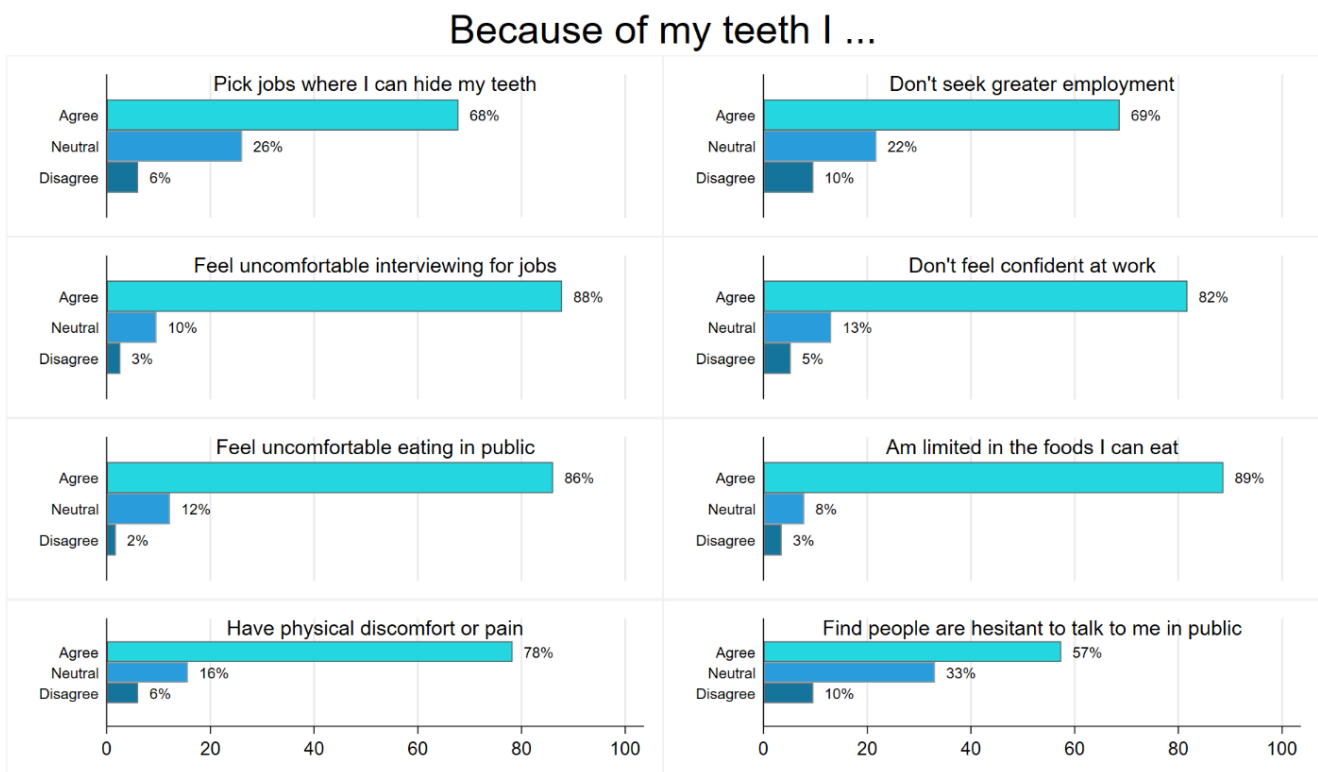
SURVEYS

To assess the impact of dental restoration, a series of surveys were delivered to Grin Grant program participants. Surveys were delivered at program intake and 3-months, 6-months, 1-year, and 1.5-years post-restoration. Surveys were developed by the Fletcher Group research and evaluation team in collaboration with Grin Grant program administrators. All surveys were delivered via email invitations from the program evaluation team to program participants and were voluntary. To assess the impact of the A.P.P.E.A.R. program, an additional survey was developed and administered monthly.

The dental restoration surveys were designed to measure a variety of Grin Grant program impact indicators including recovery capital, general anxiety and depression, self-esteem, social and dental anxiety, employment and income, housing status, and substance use.

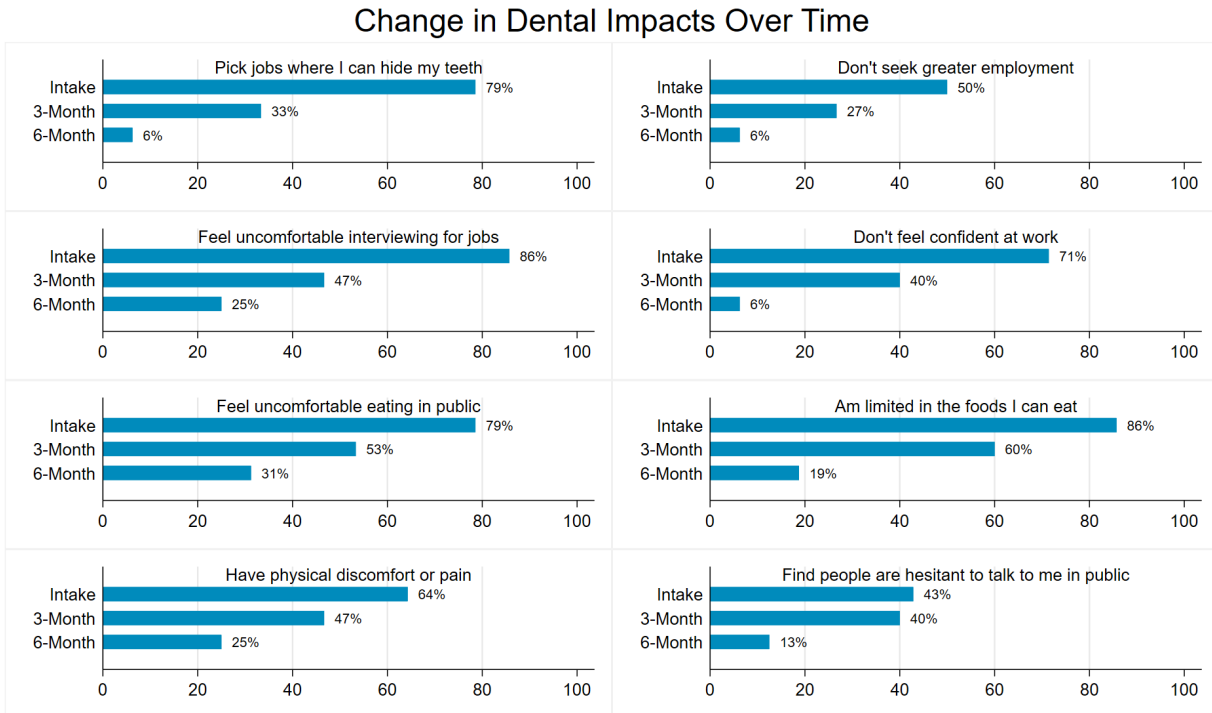
SAMPLE SURVEY:

Figure 1. Impacts of oral damage experienced by Grin Grant participants (N = 115).



At intake, Grin Grant program participants report significant impacts on the eight assessed factors due to their oral damage. Almost all participants agreed that they feel uncomfortable interviewing for jobs due to their teeth (88%), don't feel confident at work due to their teeth (82%), feel uncomfortable eating in public due to their teeth (86%), and are limited in the foods they can eat (89%). The majority indicated they have physical discomfort or pain due to their teeth (78%). Additionally, 68% agree that they pick jobs where they can hide their teeth, 69% don't seek greater employment due to their teeth, and 57% find people are hesitant to talk to them in public due to their teeth.

Figure 2. Percent of participants who agreed with dental impact statements at intake, 3-months post-restoration and 6-months post-restoration (N = 16).



When comparing intake and 3-month post-restoration impacts, the most significant effects were related to employment. Specifically, the share of participants that agreed they picked jobs where they can hide their teeth decreased by 58% 3-months post-restoration. Additionally, we find that the share of participants that agreed they felt uncomfortable interviewing for jobs decreased by 45% 3-months post-restoration. The majority of the impacts of dental restoration took until 6-months post-restoration to be fully realized.

QUALITATIVE IMPACTS OF DENTAL RESTORATION

IMPACT OF DENTAL RESTORATION ON RECOVERY

To assess the holistic impacts of dental restoration and assess contextual factors, participants were asked to write about how their smile has affected their recovery in each of the post-restoration surveys. A total of 106 write-in responses were analyzed to assess themes.

When speaking of how the restoration has impacted their recovery, numerous participants wrote about how their new smile has increased their self-confidence. One participant wrote, *“It's given me more confidence to be front and center”* and another wrote, *“It gave me more confidence to*

go after what I want". Others noted how their increased confidence has aided in family and social interactions with one participant writing, *"I feel more confident interacting with family members and other people."* Other participants noted how their increased confidence has allowed them to help others, *"More confident and outgoing so I can now help others"* and *"I have a newfound confidence which has helped me branch out and take on service positions"*.

Participants also wrote about how their new smile has impacted their self-esteem and self-worth. One participant wrote that their new smile *"has given me self-confidence and a sense of self-worth"*. Participants also noted that their new confidence enabled them to confidently share their recovery story. One participant wrote that their new smile *"Gave me confidence to get up and give my lead and share my story, also allows me the courage to talk to the newcomer and share my experience of strength and hope"* and another wrote that their dental restoration had, *"Given me to confidence to share my personal recovery experience"*.

Participants also noted positive impacts related to public speaking. One participant noted, *"All of it has been positive. I have had to speak on recovery panels for seminar and it has allowed me to speak in public."* Another participant wrote, *"I am confident in my speech and continue to share my experience of growth."*

Impacts related to employment were also noted by participants. One participant wrote, *"I've gotten a pay raise and promoted at work"* and another noted, *"It has helped me get a better job and introduced me to more people"*. Another participant wrote, *"I have applied for more opportunities in my job, and my education, I have taken on more sponsees and I have gained more confidence in myself."*

Other participants wrote about how the Grin Grant program as a whole, including the support offered through the A.P.P.E.A.R. program has helped them. One participant wrote, *"My teeth are great, and I appreciate them. But I've benefited so much more from the entire program."*

Finally, participants wrote about how their dental restoration has impacted multiple areas of their life. One participant wrote,

"Since the 1st day of my restoration I have applied for jobs I wanted but was afraid to apply for, applied for peer support classes to be more involved in my community. I have my confidence back; I can look at myself in the mirror and [feel] really seen. My emotional and physical self FINALLY match all the work I have done mentally. I am complete!"

Another participant wrote about how the restoration has impacted their goals for the future, writing,

"I have lots of confidence! I want to go after my GED and pass. As soon as I get my computer or laptop, I will start the studying process. I want to find a different kind of work. I want to try new things. I want to beat this social anxiety every time I am around people. My last job I worked by myself. I want to get to the point now where I'm comfortable around people and doing new things. I've been working on this through my recovery and my smile put the drive in me to go and get these things. I do deserve them! Thank you Grin Grant!"

IMPACT OF DENTAL RESTORATION ON RELATIONSHIPS

Participants were also asked to write about how their smile has affected their family and personal relationships in each of the post-restoration surveys. A total of 102 write-in responses were analyzed to assess themes.

Participants wrote about how their dental restoration positively impacted their children and their relationship with their children. One participant wrote, *“My daughters are proud to be seen with me”* and another wrote, *“My daughter is so happy I smile now”*. Another participant wrote, *“My kids are not embarrassed of me and are proud of me”* and another participant noted, *“My daughters are proud to introduce me to their friends and take family pictures with me. This has done wonders for eliminating the guilt and shame I felt around my children. I am closer with my family.”* Finally, participants noted being able to engage in activities related to their children. One participant wrote, *“I have been able to meet My son's teachers without hiding behind a mask”* and another noted, *“I am finally able to meet with my teenager's faculty and staff without hiding behind a mask.”*

Participants also noted that they were more involved and comfortable with family. One participant wrote, *“I'm more involved in family gatherings wanting to go more places with my family and school functions now with my daughter”* and another wrote, *“I'm much closer. Can laugh with and engage with my family and friends. I'm not ashamed to be seen or noticed anymore.”* Another participant wrote, *“I'm not embarrassed anymore to smile at everyone and express my feelings and to go out in public with my family. Laughing out loud is nice and so contagious. I feel like my ability to smile and laugh has had a great positive impact on my loved ones.”* Finally, a participant wrote, *“I have a smile now my family is happy to take pictures with me and partake in family activities. I can talk to other parents.”*

Numerous participants also indicated that being able to take pictures with family was a large benefit of their new smile. One participant wrote, *“I just recently got married a few months ago and was happily able to smile in all my wedding pictures”* and another noted, *“It makes my wife happy that I will take pictures now and actually smile”*. Another participant wrote, *“Pictures with my son and grandkids are awesome now, that was something that bothered me before the restoration. I don't see people shying away when I talk face to face anymore.”* Another participant wrote, *“I am not embarrassed to take pictures with them or feel I'm a letdown to them when out in public.”*

Participants also remarked on how their dental restoration affected their relationships and comfort in the recovery community. One participant wrote, *“I look the part of someone in long term recovery which helps me to be more useful to the newcomers and be taken seriously within the recovery community.”* Another participant wrote, *“I have a better paying job that I am happy at. My friends and others in my recovery fellowship say that I am a more free-spirited person with a humble confidence, eager to help others.”*

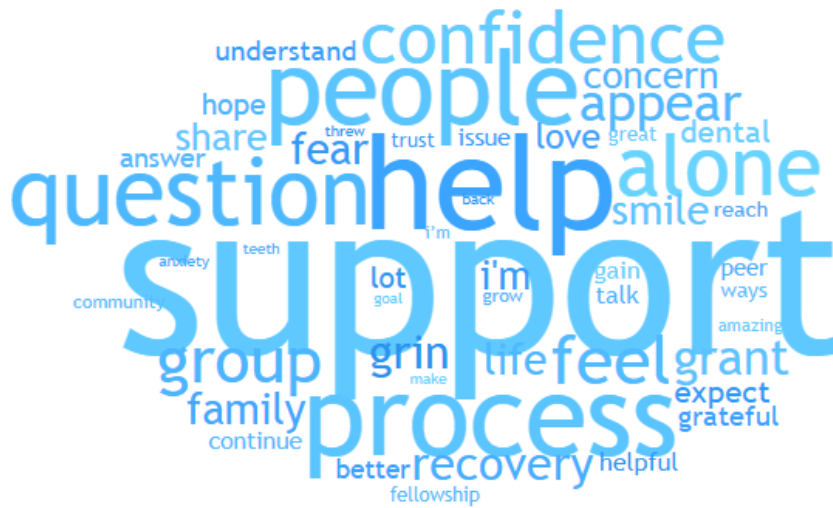
IMPACT OF THE A.P.P.E.A.R. PROGRAM

To assess the impact of the A.P.P.E.A.R. programming itself, several questions were asked to ascertain the therapeutic alliance of individuals in the A.P.P.E.A.R. program. Additionally,

participants were asked open ended questions about how the A.P.P.E.A.R. program has helped participants in their recovery and dental restoration.

When asked how the A.P.P.E.A.R. program has helped participants go through the dental restoration process, participants wrote about the value of having a group to share concerns with and how important being able to talk with participants who have already been through the process is. Figure 4 depicts a word cloud with the 50 most common elements that clients shared.

Figure 3: Word cloud depicting the A.P.P.E.A.R. program’s impact on Grin Grant participants.



In Table 3 we provide a sample of quotes written by A.P.P.E.A.R. program participants.

Table 3. Quotes from A.P.P.E.A.R. program participants.

<p><i>A.P.P.E.A.R. is a wonderful program that covers each aspect of the emotional process and physical process of restoration and it helps so much to connect with others and hear other stories about their restoration and it gives everybody strength.</i></p>
<p><i>APPEAR gives you a family in order to share and compare your experiences with in order to be able to better identify with issues or concerns you may have as well as helping to give you a fresher perspective on situations.</i></p>
<p><i>I continue to gain support and build healthy relationships. I'm starting to trust people and my fears are discussed and lessened. I know what to expect and am mentally prepared for the change in my life! I can ask questions and listen to people, I have others who CARE about the outcome and the process.</i></p>
<p><i>A.P.P.E.A.R. has given me a safe haven in which I can grow. I have found my since of trust and faith again within not only myself but others. appear has helped me to broaden my thinking and gain my worth back. Without A.P.P.E.A.R. I couldn't have done this.</i></p>
<p><i>Oh wow, I would have never done this alone. Just the fact that I was prepared was extremely helpful. All the fine folks at Grin Grant have bent over backward to make me feel safe and comfortable.</i></p>

I can imagine what it would be like to have to go through this alone, feelings and emotions run high during this big transition in my life, and I don't think I could have tried to do this without the help of Grin Grant participants. I am super grateful for this today and every one of the people that are in it and the staff helps you not feel alone.

If I were going through this by myself, I'd be scared. Fear would take over. I wouldn't be able to use my voice to speak up and ask questions or voice any concerns I may have had. In this program I'm not alone. There are people like me! No laughing at me! I can be myself, even though I get nervous speaking, I always feel better afterwards. I learn tricks and helpful tips to help me through my journey. I learn about the process through others who have went through it.

Going through my smile restoration I have had many unexpected emotions any concerns or questions I know I can ask any or all of my peers in the A.P.P.E.A.R meeting or on our group chat. Every one of my grin grant peers have given me extremely positive reinforcement that I have needed. I am very proud and grateful to be a part of this program.

The APPEAR program has helped me a lot. The other that have went through the program prior to me are there to share their experience and what worked for them. The facilitators make sure that we know we are working and deserving. Whenever a new person joins, they are welcomed like family. Also, we go with each other to dentist appointments and support each other through the process.

The program has helped me prepare for events in the dental procedure/process that I never thought of. I genuinely felt prepared for the entire process. I was informed that I would have to learn how to eat and speak with the equipment in and I thought that I'd be able to just throw them in and go. I've learned new ways to handle anticipation and the "unknown" without getting overly worked up about things.

It allows you reflection and directive. A.P.P.E.A.R. allows me direct fellowshiping with people who have and may still yet come to experience what I have. Had I had done this alone I feel I would still be somewhat unsettled about the procedure and adjusting physically as well as mentally to my plates. A.P.P.E.A.R. allows communication with others to help lay uncertainties to rest and to help put my mind at ease.

I have people that have been where I am. People that have felt the struggle that I have been they in addiction and the recovery process. I feel like I have found my place.

My anxiety and fear have prevented me from fixing my smile in the past or giving up in the middle of the process. Through the support of all the Grin Grant members as well as their personal experiences I have worked through my fear and anxiety. I would not be where I am today with my dental restoration process without learning from my fellow members. We are a supportive Family and I'm grateful to be a part of it!

I knew more about what to expect before I had my restoration surgery. If I have any questions, I can always get an answer from somebody in our group immediately. I also feel more comfortable in general because I have an extremely supportive group that understand how I feel and what I have been through and what is still yet to come. It really does feel like one huge family. And there is always so much love and support!!

Dental restoration is an important recovery support service for many individuals seeking recovery from SUD that has yet to be fully researched and evaluated. In this report, results are provided from a comprehensive evaluation of Grin Grant's dental restoration program. Specifically, we examined the impact of dental restoration on recovery, mental health, and dental impacts. Additionally, we examined how the peer support programming provided in addition to the dental restoration impacted individuals going through the process.

Grin Grant program participants' dental health and appearance prior to restoration significantly impacted social functioning and personal self-confidence. The vast majority of participants noted impacts specifically related to employment, confidence, physical discomfort and pain, and negative social interactions. Additionally, participants reported high levels of dental anxiety at intake, with approximately 38% of participants meeting the criteria for high levels of dental anxiety at intake.

When examining the impact of dental restoration itself, dental restoration was associated with significant changes in general, social, and dental anxiety when controlling for individual characteristics and time effects. However, dental restoration itself did not have a significant impact on recovery capital, depression, or monthly income. The lack of treatment effect on recovery capital is likely due to the inclusion criteria of the program. Grin Grant only accepts individuals who have been in recovery for at least a year. As such, recovery capital at intake was high and appeared to be stable over time. Additionally, the majority of participants were employed at intake. As such, there were not large changes in employment rates that would influence changes in income levels.

Qualitative analysis of data regarding how dental restoration impacted participants' recovery and person relationships revealed impacts related to self confidence and self-esteem. Participants also noted an increased ability to speak in public and the ability to apply for better and different job opportunities. Additionally, when asked how their dental restoration impacted family and personal relationships, participants indicated improvements in relationships with children, greater willingness to engage in family activities, and being more likely to take pictures and smile in them. Participants also remarked that they were more engaged in their recovery communities and service due to their dental restoration.

Finally, an analysis of the A.P.P.E.A.R. program provides evidence of the program adding support and value to Grin Grant participants as they go through the restoration process. Analysis of qualitative data found common themes around the need for support from others who have gone through the process as well as the fellowship that exists within the program.

Taken together, these results indicate that Grin Grant is an effective program that provides a much-needed service to individuals in recovery. Additionally, the results highlight the importance of providing peer support programming in addition to dental restoration to support individuals as they go through the transformative process of dental restoration.