Teaching Practices and University Student Well-being: an Outcome Evaluation

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Abstract

Student mental health is an increasing concern on university campuses, which can greatly impact learning. Different teaching practices can result in various learning outcomes. However, there is a gap in literature regarding the impact of teaching practices on student well-being. Our previous studies identified teaching strategies that promote student well-being by surveying students in a university in West Coast Canada in 2015-2016. We designed knowledge translation events on specific teaching practices that enhance student wellness. Accordingly, six knowledge translation events were presented to instructors from various faculties of the above identified university through symposiums and poster presentations. This project evaluated the effectiveness of these events by instructors' reports before and after on their perceptions of their knowledge, skills, and sense of responsibility around supporting student well-being. Although not significant, the findings of this study suggest that instructors' awareness is improved after participation in one knowledge translation event.

Keywords: students, well-being, instructors, teaching practices, knowledge translation

Introduction

Mental health among university students represents a challenging and growing public health concern (MacKean, 2011; Wörfel et al., 2016). Research has demonstrated the negative impacts of mental illness on student academic performance (El Ansary & Stock, 2010; Keyes et al., 2012; Holmes & Silvestri, 2016). University students who struggle with mental health issues report that they have difficulty learning the subject matter and managing their academic tasks

(Shor, 2017; 2016). Additionally, mood and anxiety disorders can negatively impact on students' alertness, attention, memory, and executive functions, which translate to a decrease in academic performance (Holmes & Silvestri, 2016). Other associated impacts of student mental health issues include a loss of interest in learning, lower self-esteem, poor concentration, and guilt (Patterson & Kline, 2008).

The world wide prevalence of mental health issues on university campuses has been rising (American College Health Association, 2012; Shamsuddin et al., 2013; Wörfel et al, 2016). According to data reported in the ACHA-National College Health Assessment II (ACHA-NCHA II) for British Columbia (2013), 89.5% of post-secondary students felt overwhelmed by their academic responsibilities, 54.6% felt overwhelming anxiety, and 35.1% felt so depressed that it was difficult to function. In addition, suicide is the first or second most common cause of death among students (MacKean, 2011). Therefore, addressing students' mental health should be prioritized in colleges and universities. Specifically, a comprehensive and systemic approach is needed to encourage the whole campus to take responsibility for enhancing and maintaining the mental health of students.

Prevention strategies can effectively reduce the number of students who become mentally ill due to the high pressure of college and university environments (Canadian Association of College & University Student Services and Canadian Mental Health Association, 2013). Attention has mostly focused on awareness, identifying at-risk students, and accessibility of services; however, newer approaches to student wellness include a consideration of the learning environment.

Teaching practices

Different teaching practices and strategies can result in different outcomes, such as changes in one's grade point average, in one's interest in the subject area, and in one's comprehension of the course materials (Dennison, Gruber, & Vrbsky, 2010; Moulding, 2010). As mentioned previously, stress, anxiety, and depression reduce students' intellectual and emotional flexibility, decrease their creativity, and undermine their interest in learning (Douce & Keeling, 2014). Evidence suggests that one strategy to combat student mental health challenges could be reshaping the classroom experience. More specifically, instructors are in a privileged position to create conditions that support mental well-being and thus learning, through their teaching practices (Well-being in Learning Environment, 2017).

Simon Fraser University has identified a set of inter-connected strategies for instructors to enable them to create well-being in their classroom through usage of the following practices:

1. Positive Classroom Culture: "Creating an enjoyable and welcoming classroom culture can enhance positive wellbeing for students and instructors. This can be accomplished through humour, inspiration, open-mindedness, connecting with students or deeply engaging them in their learning."
2. Optimal Challenge: "Students perform and feel their best when they are challenged, but have adequate resources to meet the challenge."
3. Social Connection: "Facilitating interaction helps students build social networks which foster resilience and are an asset to well-being. Social connection in the class can help create a sense of community and positive classroom culture."
4. Flexibility: "Providing students with some flexibility over their learning experiences helps them to feel empowered and supported, contributing to their well-being."

5. Personal Development: “By providing opportunities for personal and professional growth in class you can increase students’ skills, resiliency and preparedness for the future.”
6. Inclusivity: “An inclusive learning environment demonstrates an intentional consideration for all students and in doing so, can enhance positive well-being.”
7. Real-life Learning: “By connecting learning to life, you offer students opportunities to build their personal skills and confidence in their future.”
8. Services and Supports: “The in-class experience provides an important opportunity to connect students with resources that can support their personal well-being and readiness to learn.”
9. Instructor Support: “As an instructor you play an important role in setting a positive and supportive tone that can go a long way in helping students to feel welcome and at ease.”
10. Civic Engagement: “Providing students with opportunities to make a valued contribution through their coursework can boost their emotional well-being.” (Well-being in Learning Environments, 2017).

Additional research suggests that utilizing supportive teaching practices will lead to a healthy learning environment for students and can translate into the following student characteristics:

Social connectedness and belonging: A sense of belonging and connectedness in school community is both protective of health and contributes to improved academic achievement. (Rowe, Stewart, & Patterson 2007, p.524).

Positive self esteem: Self-esteem can have positive impacts on self-rated health status, resilience, interpersonal relationships, academic achievement and mental health (King, Vidourek, Davis & McClellan, 2005)

Empowerment and Autonomy: A sense of autonomy and control contributes to enhanced motivation, well-being and improved individual functioning and resilience (New Economics Foundation, 2008).

Resilience: Resilience is the ability to manage stressors in a positive way and maintain mental health (Herrman, Stewart, Diaz-Granados, Berger, Jackson, & Yuen, 2011). Resilience is associated with many long term health benefits and results from a combination of personal resources, and environmental supports (Herrman et al., 2011).

Happiness: Positive psychology literature has shown that positive emotional states are linked to improved overall functioning, learning, resilience and health (Fredrickson, 2004).

The above research demonstrates some promising direction for improving university student wellness. However, there is a gap in the literature in this area regarding the impact of teaching practices on student well-being when these practices are identified by the students themselves. With this in mind, Lee et al. (2015, 2016) conducted studies to identify teaching practices that enhance student well-being. In 2015 and 2016, the research team gathered data from thousands of undergraduate students at a university in West Coast Canada by administering the Undergraduate Student Experiences Survey and conducting focus groups. Data from all sources were synthesized and the findings indicated that student well-being was enriched when:

- Expectations for success were clearly expressed
- Students felt connected to their peers, the instructor, and the subject matter
- Students felt supported in their ability to succeed, through an engaging classroom experience

Knowledge Translation

Knowledge translation can be understood as a dynamic and iterative process that includes the synthesis, dissemination, exchange and ethically sound application of knowledge to improve health, provide more effective health services and products, and strengthen the health care system (CIHR, 2017). Another way to conceptualize knowledge translation is that it is a multidimensional and active process, with its primary purpose being to improve the lives of others (Schreiber, Perry, Downey, & Williamson, 2015). If the use of specific teaching practices can improve the mental health and well-being of university students, then corresponding instructors will need to learn about these strategies in order to implement them into their classroom. Accordingly, instructors will require effective knowledge translation activities to support this process.

As knowledge translation seeks to close the gap between knowledge and action, health promoting behavior change is the ideal result of effective knowledge translation. The Transtheoretical Model of Behavior Change (Prochaska & DiClemente, 1984) posits that behavior change occurs in five stages: precontemplation, contemplation, preparation, action, and maintenance. This model will be applied to the participants within this study in the discussion section to help explain some of the findings.

Purpose

Findings from the aforementioned previous studies conducted by Lee et al., (2015, 2016) were shared with instructors through knowledge translation (KT) events in the form of symposiums and poster presentations. The purpose of this study (KT Evaluation) was to evaluate the outcomes of these KT activities. Specifically, the aim was to determine to what the degree the KT events impacted instructors regarding their knowledge, skill, and sense of responsibility

around enhancing student well-being. The goal of the current project lends itself to the overall long-term goal to produce effective dissemination of KT activities to instructors, which will ultimately foster student well-being within the UBC community.

Methods

Participants

A sample of 67-83 participants mainly from the faculties of Arts and Sciences participated in six KT events. Inclusion criteria were the job title of a teaching instructor either at the secondary or postsecondary level, a teaching assistant, or other support personnel. Instructors were invited to participate in the KT events by the UBC Teaching and Learning Enhancement Fund (TLEF). We were able to reach UBC instructors and present our KT activities in events organized by TLEF in 2016 and 2017.

Procedure

Five separate knowledge Translation workshops (KTws) were presented to attending instructors where the content was focussed on providing information about teaching strategies that support student well-being. All KT events involved a PowerPoint presentation by the principal investigator, followed by small group discussions among instructors regarding their perception of the mentioned practices. Each KTws session lasted one to two hours. At the end of each session, participants were provided with worksheets that encouraged them to reflect on how they could best apply the identified teaching strategies to their teaching context.

In addition to the five KTws sessions, one KT session was presented in a poster session (KTp). The poster contained similar information as those presented in the KTws format. The principal investigator was present during the poster session and explained the content to participants who were interested in this topic. When the participants finished reviewing the

poster, the principal investigator invited them to fill out a survey (see Kp evaluation measure for details).

Measures

Effectiveness of five out of six of the events (KTws) were evaluated by asking instructors to report before and after the KT session on their perceptions of their own knowledge, skills, and sense of responsibility around supporting student well-being using a "dot-mocracy" method. As discussed above, the KTp session was presented as a poster, and therefore, usage of the dot-mocracy method was not feasible to evaluate the effectiveness of the presented materials. As a result, the researchers did not implement an outcome measure for KTp. However, we were able to invite participants to share their thoughts and comments using a survey which contained questions regarding barriers and needed supports related to the enhancement of student wellbeing through teaching practices.

KTws Evaluation Measure (dot-mocracy method)

In order to collect data on the aforementioned perceptions of participants and the effectiveness of our KTws events, four separate statements were presented to the participants on four posters that were hung on the walls of the presentation room. The statements on the posters were as follows:

1) I believe that faculty members are responsible for supporting student wellbeing

2) I am knowledgeable regarding the impact of mental health and wellbeing on learning

3) I have the skills to enhance student well-being through my teaching practices

4) I am knowledgeable about teaching practices that promote student well-being.

Each poster containing one of the statements also illustrated a scale from 0-10 below the statements.

<insert Figure 1 here>

The participants were given circular colored stickers before the presentation started and were asked to place a sticker on the 10-point scale on each of the posters indicating to what degree they agreed with each of the statements. At the end of the session, the participants were given another set of circular stickers in a different color and again asked to rate their level of agreement with each of the statements. Hence, this method of collecting data was coined the dot-mocracy.

Pre and post measures were used in order to quantify the knowledge attained during the KTws events. Specfically, this method enabled researchers to measure pre-existing knowledge, skills and belief of the participants regarding the impact of teaching practices on student wellbeing. Furthermore, this method allowed us to compare and measure participants' learning as a result of the KTws experience and to evaluate the effectiveness of the sessions. The mentioned pre and post questions were created during multiple meetings attended by experienced instuctors, including two Killam Teaching Award recipients, recognized for their excellence in teaching. The questions were created by careful consideration of the presented material to tap into instructors' knowledge and level of accountability for student wellness. In addition, the questions investigated instructor's pre-existing knowledge and obtained knowledge of teaching practices that supported student well-being.

KTp (Fill in a dot method)

The purpose of the KTp session was to gain some understanding on instructors' perspectives on the plausibility of implementing the teaching practices presented within the poster. The survey evaluation tool consisted of a list of potential barriers and a list of potential needed supports that may be relevant when considering implementing the suggested teaching

strategies. The participants reviewed the poster and were then asked by the Principal Investigator to participate in the survey by filling in any dots associated with the listed relevant barriers or supports needed. Some examples of identified barriers included: time constraints, funding constraints, lack of student receptiveness, and lack of support. Some examples of perceived needed support included: more time, more funding, support from colleagues, and more feedback from students.

<insert Figure 2 here>

The survey sheet also included empty rows for both the barriers and supports needed portions so that instructors could identify items that had not yet been recognized by the research team.

Description of sessions

The first event called "Science Symposium" was held in September 2016. The event duration was 1.5 hours and it included instructors who taught first year science courses. During this session, participants were able to participate in in-depth discussions in small groups regarding the implementation of the augmented teaching practices. Session number two named the "Winter Institute" was a 2 hour workshop held in December 2016 and it consisted of instructors and teaching assistants from any Faculty. The "Winter Institute" workshop was promoted as a professional development opportunity for instructors to enhance their teaching skills. The third session was held in February 2017 and was named "Classroom Climate." Participants attending this session were interested in addressing diversity in the classroom as well as creating a safe learning space for students. This event was attended by teaching assistants and instructors from any Faculty. Session four was held in April 2017 and it was named "Healthy Campus, Healthy Minds." Participants attending this session were specifically

interested in ameliorating their skills to address student mental well-being. This event was attended not only by university instructors, but also by high school instructors. The workshop's duration was 45 minutes and therefore, we were not able to provide sufficient time for discussion and reflection on the identified teaching practices. The fifth event "Okanagan Learning Conference" took place at the University of British Columbia Okanagan campus and it consisted of instructors and teaching assistants. During this 1 hour workshop, university and college instructors had the opportunity to become familiar with the augmented teaching practices and participate in in-depth discussions. Finally, the last event called "Celebration of Learning" was a poster session during which researchers displayed their teaching and learning initiatives on topics such as teaching technology, course design, use of classroom space and student well-being. This event was attended by many participants where we were able to recruit instructors who were interested in teaching practices and student well-being.

Data Analysis

In order to analyze the data, a Microsoft Excel program was used to compile and organize all the obtained data from different sessions. Clustered column charts were made for each session seperately comparing the overall average for each statement, pre and post intervention.

<insert Figures 3,4,5,6,7, here>

Percent differences of pre and post interventions for each statement were also calculated using Microsoft Excel. In order to determine if the results were significant, the obtained data from all sessions were added for each statement, and SPSS statistics software was used to run a two-sample T-test. The two sample T-test was chosen as the appropriate method of analysis since the variable of interest was the difference between the two sample means. A paired sample T-test could not be conducted for the analysis as some participants only participated in the pre-

intervention dot-mocracy and not the post-intervention dot-mocracy. Due to the method of data collection (dot-mocracy), which made participants anonymous to the researchers, we were unable to identify those who only did the pre-intervention dot-mocracy and omit their answers. Therefore, analysis of paired a sample T-test could not be done as the analysis requires that for each observation in one group, there should be a corresponding obsevation in the other group.

As mentioned previously, the number of participants ranged from 67 to 83. Again, this was a result of participants leaving the KTws sessions without completing the post-intervention dot-mocracy.

Results

Statement 1: I am knowledgeable about the impact of mental health and well-being on learning.

The focus for statement 1 was to determine participants' knowledge regarding the impact of mental health and well-being on student learning before and after the KT session. As demonstrated in figure 1, the mean of the post-presentation was consistently higher for all sessions for statement 1, with the lowest percent difference of 19% for session 3, and the highest percent difference of 34% for session 4. In order to determine if there was a significant difference between pre and post groups for statement 1, two sample t-tests were conducted. The purpose of running the t-tests was to determine if there was any significant difference between the averages of the pre and post groups for statement 1.

There was no significant difference between the pre and the post scores ($T=-.307$ $p>0.05$, 95% CI [-10.816, 7.906]). As can be seen in Figure 1, the pre ($m=6.84$) scores are slightly lower, yet not significantly, than the post ($m=8.30$) scores on the dot-mocracy.

<insert Figure 8 here>

Statement 2: I am knowledgeable about teaching practices that promote student wellbeing.

Statement 2 tapped into the participants' knowledge regarding specific teaching practices that promote student well-being. As shown in figure 2, the mean for the post-presentation is higher for all sessions for statement 2, with the lowest percent difference of 48% for session 2 and the highest percent difference of 283% for session 4. Two sample t-tests were conducted in order to determine if there was a significant difference between the pre and post groups.

There was no significant difference between the pre and the post scores for statement 2 ($T=-.720$ $p>0.05$, 95% CI [-11.109, 5.175]). As can be seen in Figure 2, the pre ($m=4.75$) is lower, yet not significantly, than the post ($m=7.71$) scores on the dot-mocracy.

<insert Figure 9 here>

Statement 3: I believe faculty instructors are responsible for supporting student well-being

Statement 3 was used to determine if the instructors saw themselves as responsible for supporting student well-being. For this statement, the means were very close for the pre and post presentations in all sessions with a percentage difference of 0% between the pre and post presentation for sessions 2 and 4. Session 3 had the highest percentage difference of 16%.

There was no significant difference between the pre and the post scores ($T=-.093$ $p>0.05$, 95% CI [-14.545, 13.244]). As can be seen in Figure 3, the pre ($m=8.42$) scores are slightly lower, yet not significantly, than the post ($m=9.07$) scores on the dot-mocracy.

<insert Figure 10 here>

Statement 4: I have the skills to enhance student well-being through my teaching practices

Statement 4 intended to determine the instructors' perceived skill level regarding the enhancement of student wellness. As demonstrated in figure 4, the means for the post-presentation were consistently higher for all sessions compared to the pre-presentation means,

with session 4 having the highest percent difference of 206% and sessions 2 and 4 having the lowest percent difference of 36%.

There was no significant difference between the pre and the post scores ($T=-.607$ $p>0.05$, 95% CI [-10.603, 5.621]). As can be seen in Figure 4, the pre ($m=5.40$) is slightly lower, yet not significantly, than the post ($m=7.89$) scores on the dot-mocracy.

<insert Figure 11 here>

KTp results

As mentioned previously, the measurement in the KTp event was completed using a bubble sheet for instructors to fill out. The bubble sheet consisted of a list of various potential barriers and potential supports needed to implement the suggested teaching practices. Descriptive analysis of the results indicated that "time constraint" was perceived to be the most significant barrier to implementation of the teaching practices. Furthermore, class size, requiring more information and funding constraints were also identified as barriers of implementation. Interestingly, many participants also indicated that they were already implementing the teaching strategies presented in the poster session.

In terms of needed support to implement the teaching practices, participants identified requiring more workshops to help integrate practices into their classrooms as the most useful support. Handouts, more time, funding and feedback from students were other commonly identified supports.

Discussion

Although the results of this study were not significant, it is worth noting some trends that are useful for future research. First, regarding the KTws evaluations, for statements which tapped into specific teaching practices and skills (2 and 4), there was a consistently high percent

difference across all sessions. Whereas statements which were more focused on knowledge and responsibility around student well-being (1 and 3), had the lowest percent difference between the pre and post presentation. These findings suggest that the KTws sessions had a greater influence on skill development for enhancing student wellness, while the value system for supporting student mental health was already present among instructors.

We believe there to be some key limiting factors contributing to the overall nonsignificant outcome. First, our research team was "preaching to the choir". The instructors who attended the KT sessions did so voluntarily and likely because they were already passionate about promoting student wellness through teaching practices. As indicated in the dot-mocracy, the scores on all of the statements before the intervention were relatively high, which demonstrated participants' pre-existing knowledge and concern for student mental health and well-being. Acknowledging this limitation in the study suggests that future KT sessions may be more impactful if they included instructors who are less knowledgeable or skillful in using teaching practices that foster student well-being. In particular, it would help the research team to discern whether the KT sessions may be more effective with these instructors.

Secondly, as mentioned in the result section, the participants were not homogenous with the six sessions consisting of faculty members and teaching assistants with different years of experience. Therefore, lack of homogeneity of the sample might be another limiting factor in our study.

Furthermore, across all sessions, we consistently had more data for the pre-presentation scores than the post-presentation scores, suggesting some participants left the session before reaching the end. In the future, it will be helpful to identify those who leave the session in order to improve our workshops in accordance with their feedback.

Another consideration is that the participants were asked to complete the dot-mocracy in a room full of other participants. Placing the dots on the posters was not an entirely anonymous task, and it is possible that participants were influenced by the social desirability bias to select scores that would appeal to nearby colleagues. In particular, statement 3 (I believe faculty instructors are responsible for supporting student well-being**)** had quite a low percent difference between the pre and post presentation, and this may be partially attributed to the presence of other instructors.

Furthermore, it is questionable whether a significant shift in perception can be made to influence future behaviors in a single 1-2 hour information session. During the KTws sessions, the discussions among participants were lively and engaging, and general feedback from participants was that they supported the learnings from the presentation. However, once the session was over, the participants did not receive any follow up education from the team on the topic of promoting student wellness through teaching practices, which may have further cemented their learning. There are various behavior change models that suggest that consistent and continuous exposure to a new idea is necessary for behavioral change to occur.

The Transtheoretical Model of Behavior Change (Prochaska & DiClemente, 1984) stresses the importance of continuous monitoring and efforts to maintain progress at each stage. Delivering a 1-2 hour education session may have ignited an increase in awareness regarding how student mental health may be impacted by specific teaching practices, but no consistent follow-up was provided. Using this model, likely these instructors were in the preparation stage for implementing the teaching practices and would have benefited from ongoing support to take action.

In addition, the Behavior Change Wheel is a theoretical approach developed from 19 frameworks of behavior change identified in a systematic literature review (Michie, van Stralen, & West, 2011). Within this framework, behavior change is largely influenced by motivation, which includes habitual processes. The instructors who participated in these KT events likely already possessed the motivation to learn about these new teaching strategies. However, in order to promote the action phase of tangible behavior change, education and training provided in a habitual manner would likely support this process. Further research in this area would include more consistent follow-up education sessions with the instructors to increase the retention of the learnings, thereby increasing the chances that the teaching practices would be put into action.

Contextualization is an important variable to consider when delivering effective knowledge translation. According to the Knowledge-to-Action cycle, in order to foster uptake of research, one needs to adapt the knowledge to the context in which it is to be applied, understand the barriers and facilitators to behavior change, and use that information to select and tailor interventions (Graham et al., 2006). In considering this research, a future initiative within the TLEF project is to provide individualized support for instructors who are interested in implementing these teaching strategies in specific classes. Using a 1:1 educational strategy with instructors where the training is tailored to their specific teaching environments could enable more comprehensive learning and a larger likelihood that the teaching practices would be put into action. Moreover, if instructors identify and address barriers and facilitators of implementation in an individualized educational context, this may prove to be more effective when comparing to this process to the KT session group learning format.

Knowledge Translation

According to Graham & Tetroe (2007), knowledge translation (KT) historically has been used to describe a variety of activities including dissemination, linkage and implementation of research. KT occurs within a system of interactions among researchers and users; therefore it is important to consider the content of KT activities as well as the audience in order to determine the optimal route to perform knowledge translation activities effectively (Graham et al., 2007) Lavis et al. (2003) has identified some key questions to consider when attempting to design successful knowledge translation activities. The guidelines within this research conducted by Lavis et al. (2003) were designed to address knowledge translation pertaining to a body of research knowledge, and although we are applying these guidelines to this single study, we found some of them to be very relevant and useful. In the following section, we will identify some of these key questions identified by Lavis et al. (2003) and explain how they can be used to make future recommendations for this current project.

What should be transferred?

This question asks knowledge translators to identify key messages for different target audiences and to fashion these in language and knowledge translation products that are understood by those targeted audiences (Grimshaw et al, 2012). In our KT activities, we developed our materials by careful consideration of our audience, who were instructors. The PowerPoint presentations and discussions included the results of the previous year's study that identified teaching practices that support student mental well-being. In order to be consistent in performing our evaluation and measurements, the materials were similar for all six KT sessions. However, in the future, the KT events may be improved by creating events that are tailored to

specific audiences. By this we mean we could craft KT sessions for homogenous audiences of instructors, for teaching assistants, and for university support personnel and so on.

To whom should research knowledge be transferred?

This question is extremely important because the level of impact of the knowledge translation depends on whether the primary target audience has been reached (Grimshaw et al., 2012). The current study was able to reach instructors who voluntarily participated in the KT session, but in reality the primary target audience would be instructors who are most in need of education to raise their awareness and skills on how to support student mental health and well-being through teaching practices.

How should research knowledge be transferred?

Planned knowledge translation is more likely to be successful if an assessment of the potential barriers informs the choice of the knowledge translation strategy (Grimshaw et al., 2012). In the future, it may be useful for the researchers to ask the instructors for feedback on the effectiveness of the KTws sessions, in order to improve upon the KT process for the upcoming sessions.

With what effect should research knowledge be transferred?

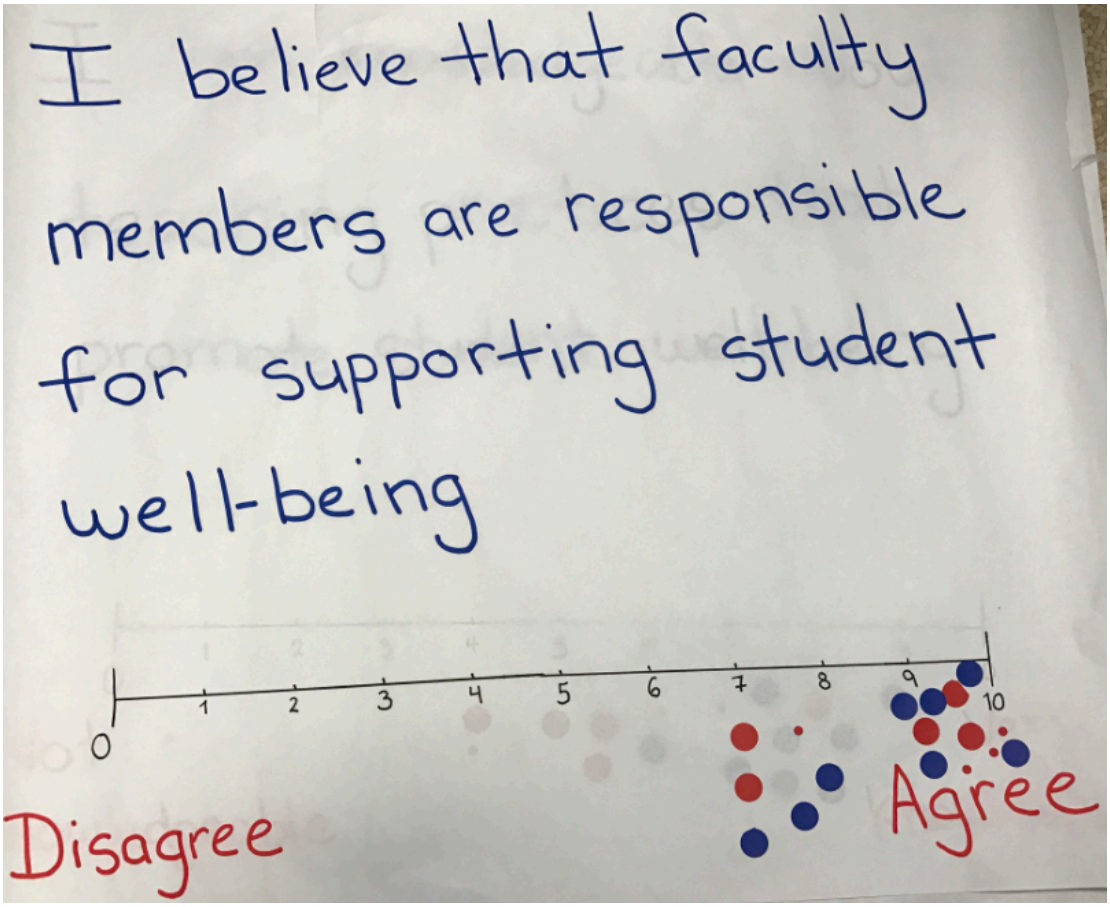
The goal of knowledge translation is to influence a change in perception or behavior that is evidence-based. The current study provided knowledge translation education sessions on teaching practices that promote student wellness, and accordingly the content was based on data collected from the students themselves. As this project moves forward, the research team will need to develop more innovative and precise outcome measures to evaluate the effectiveness of the KT sessions. Future outcome measures may include surveys that contain open-ended questions where participants can qualitatively report on the effectiveness of the KT sessions.

Despite the above limitations and directions for future research, this study has the advantage of showcasing evaluation methods that determine the effectiveness of knowledge translation activities targeting specific teaching practices within a West Coast university community.

Conclusion

The results of this study open to the door to further research in the area of effective knowledge translation within higher education learning environments. The objective of this study was to determine the effectiveness of the knowledge translation activities when applied to undergraduate Arts and Science learning environments. The content within these KT activities was focused on delivering education on specific student-identified teaching practices that enhance the mental health and well-being of university students. The outcomes within this project are devoted to the long-term to goal to foster university communities that prioritize the mental health and well-being of the student body. As student mental health challenges abound in universities internationally, studies such as these take creative and preventative action to combat this issue and enhance the experience of learning through the augmentation of teaching practices.

Figure 1


I believe that faculty members are responsible for supporting student well-being
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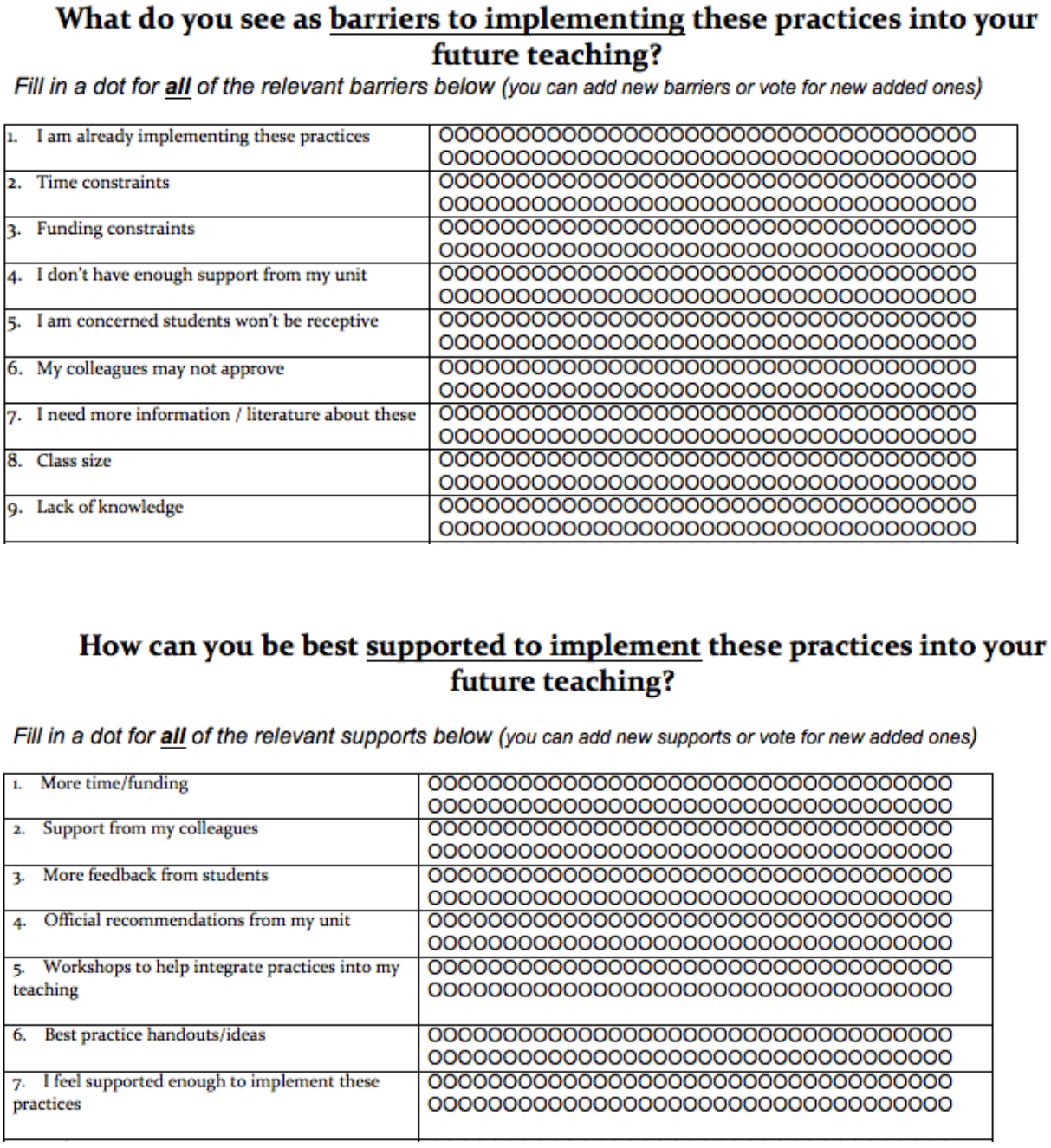
Disagree
Agree

Figure 2



What do you see as barriers to implementing these practices into your future teaching?

*Fill in a dot for **all** of the relevant barriers below (you can add new barriers or vote for new added ones)*

1. I am already implementing these practices	OOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOO OOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOO
2. Time constraints	OOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOO OOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOO
3. Funding constraints	OOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOO OOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOO
4. I don't have enough support from my unit	OOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOO OOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOO
5. I am concerned students won't be receptive	OOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOO OOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOO
6. My colleagues may not approve	OOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOO OOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOO
7. I need more information / literature about these	OOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOO OOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOO
8. Class size	OOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOO OOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOO
9. Lack of knowledge	OOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOO OOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOO

How can you be best supported to implement these practices into your future teaching?

*Fill in a dot for **all** of the relevant supports below (you can add new supports or vote for new added ones)*

1. More time/funding	OOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOO OOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOO
2. Support from my colleagues	OOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOO OOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOO
3. More feedback from students	OOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOO OOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOO
4. Official recommendations from my unit	OOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOO OOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOO
5. Workshops to help integrate practices into my teaching	OOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOO OOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOO
6. Best practice handouts/ideas	OOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOO OOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOO
7. I feel supported enough to implement these practices	OOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOO OOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOO

Figure 3

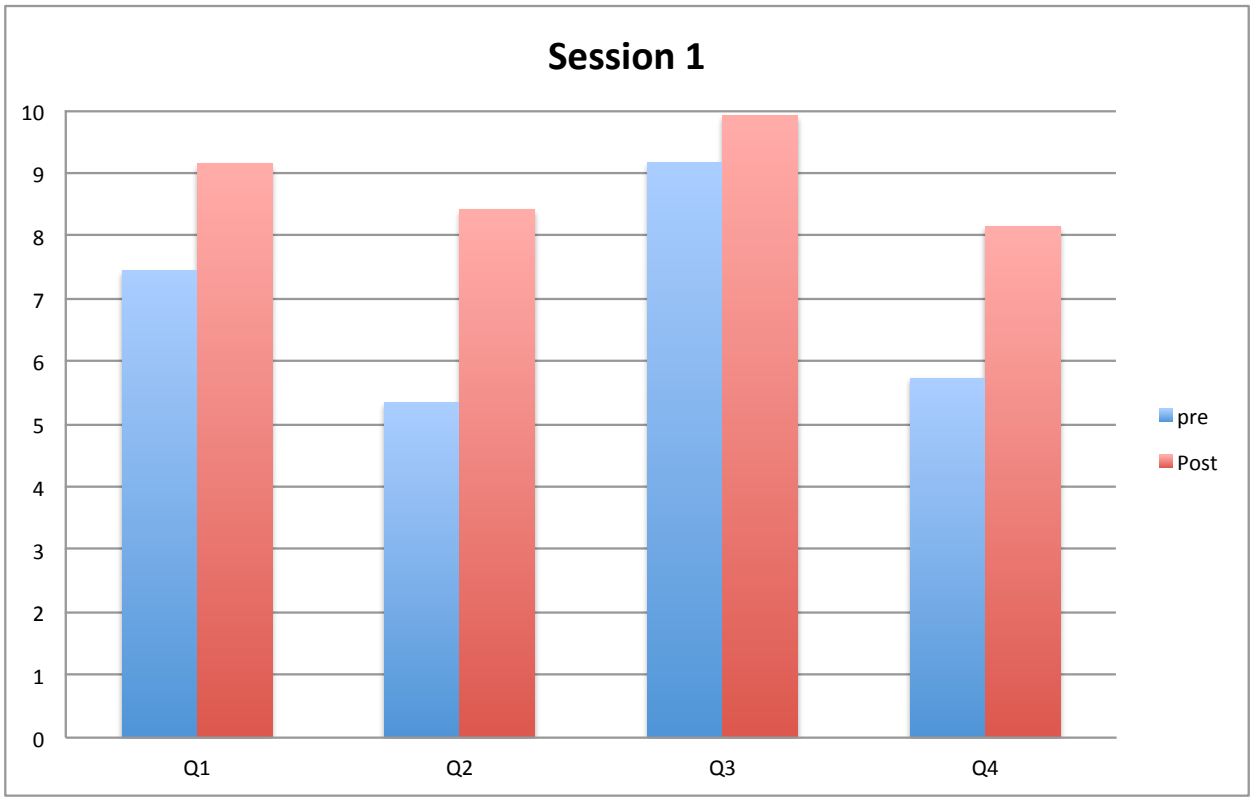
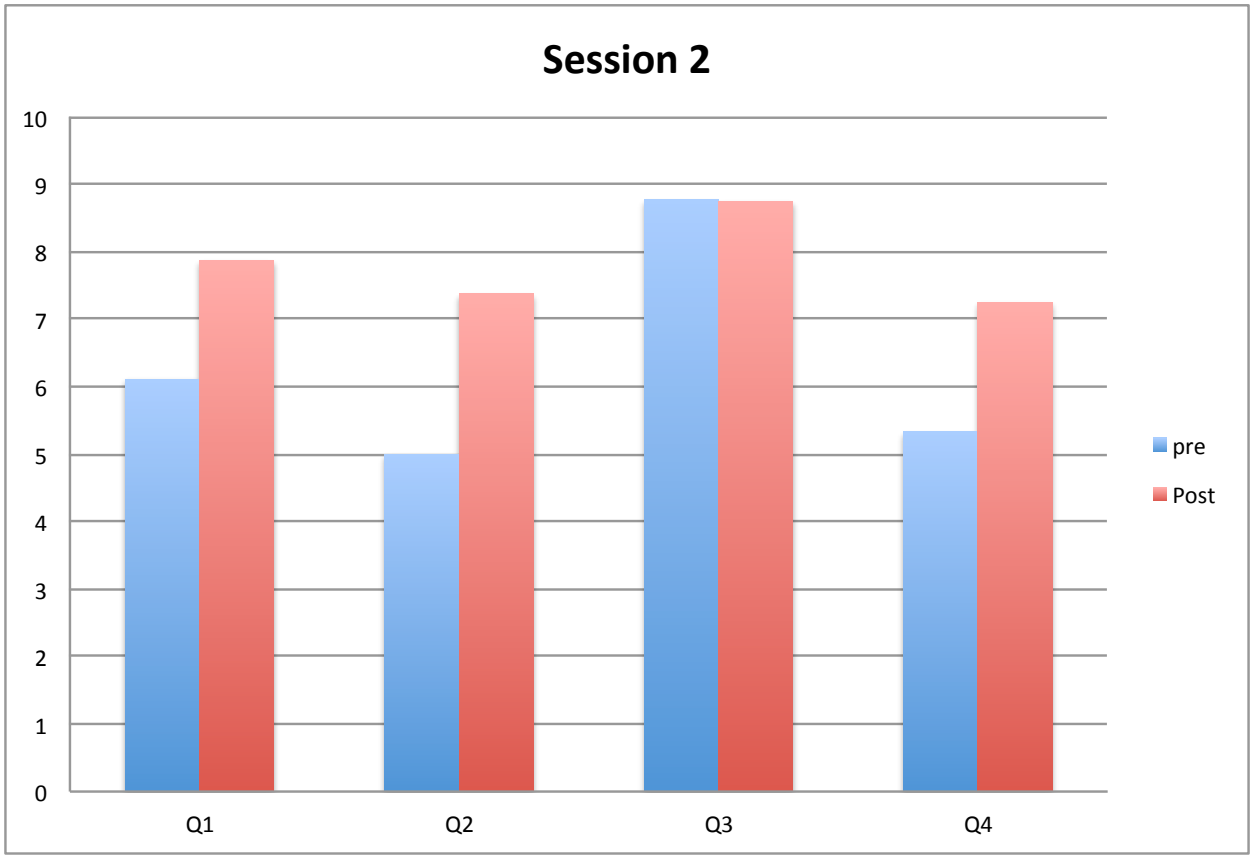


Figure 4



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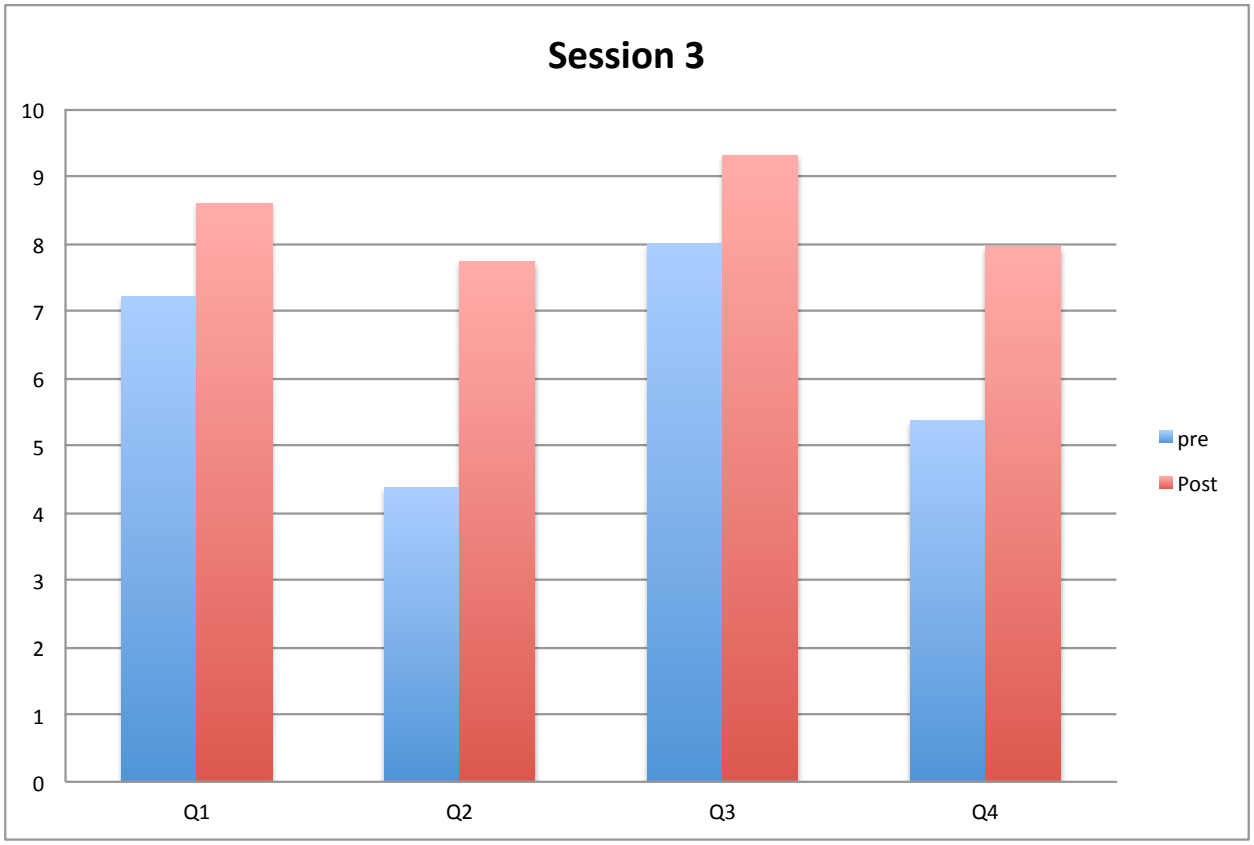
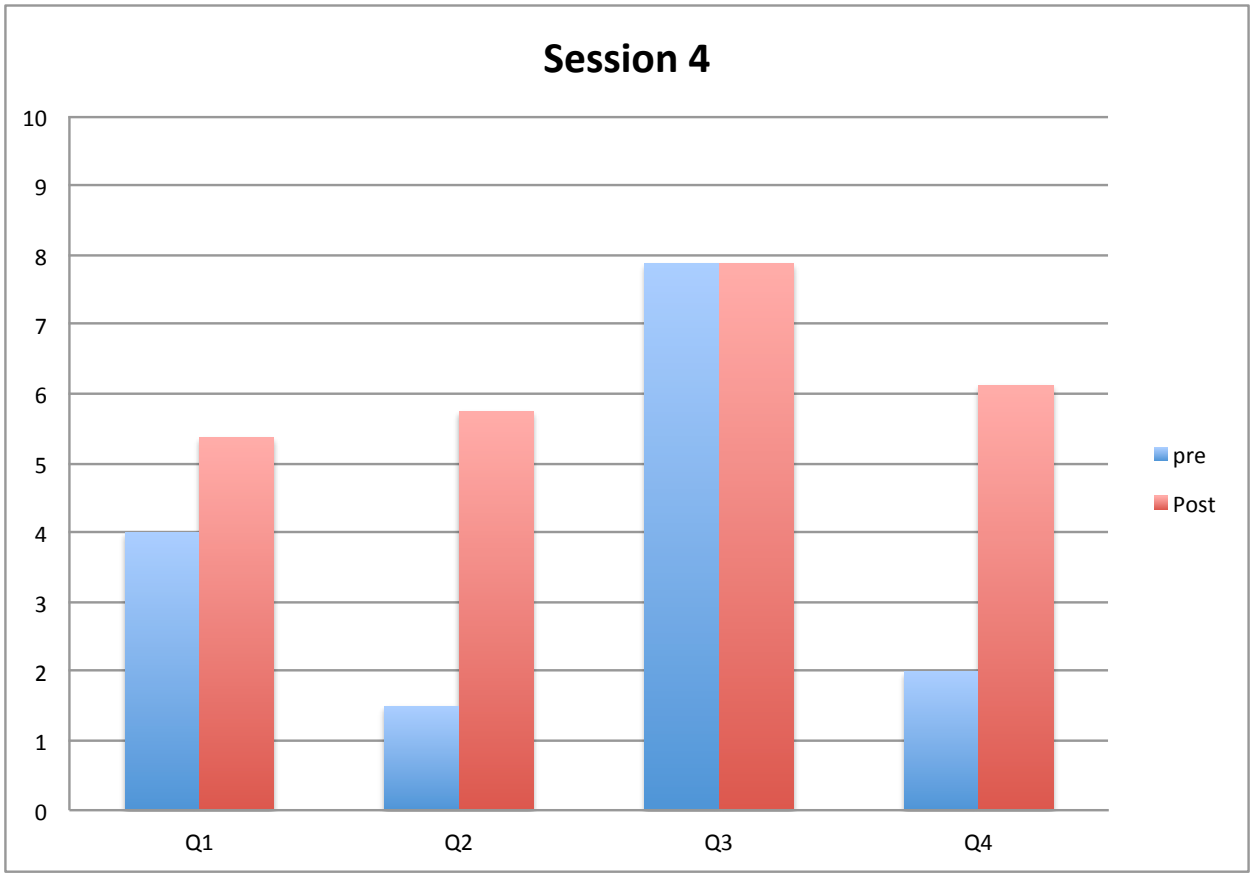


Figure 6



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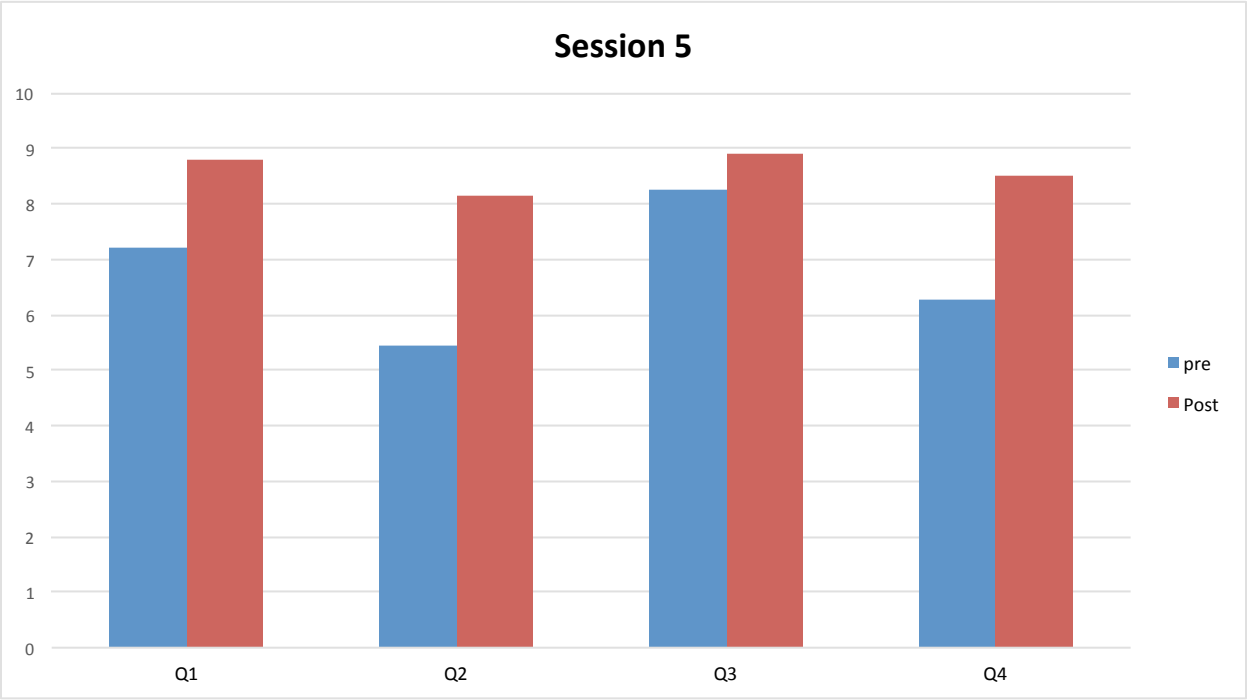

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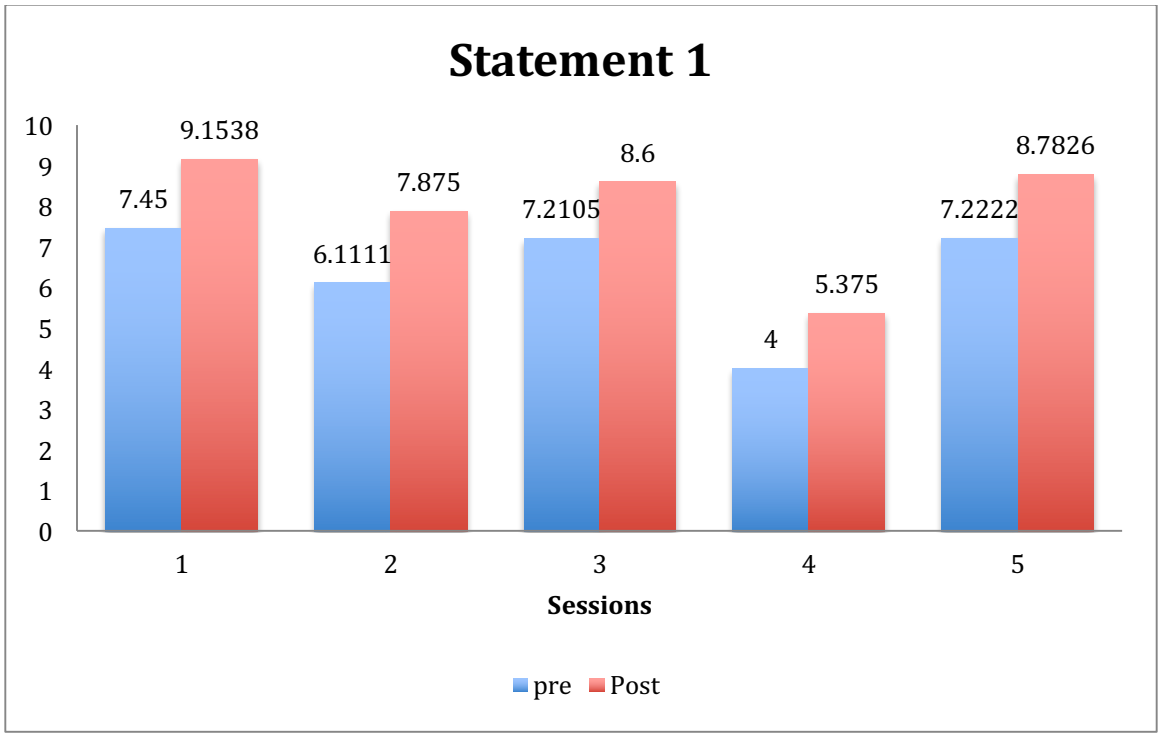
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8
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6
5
4
3
2
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7.875
6.1111
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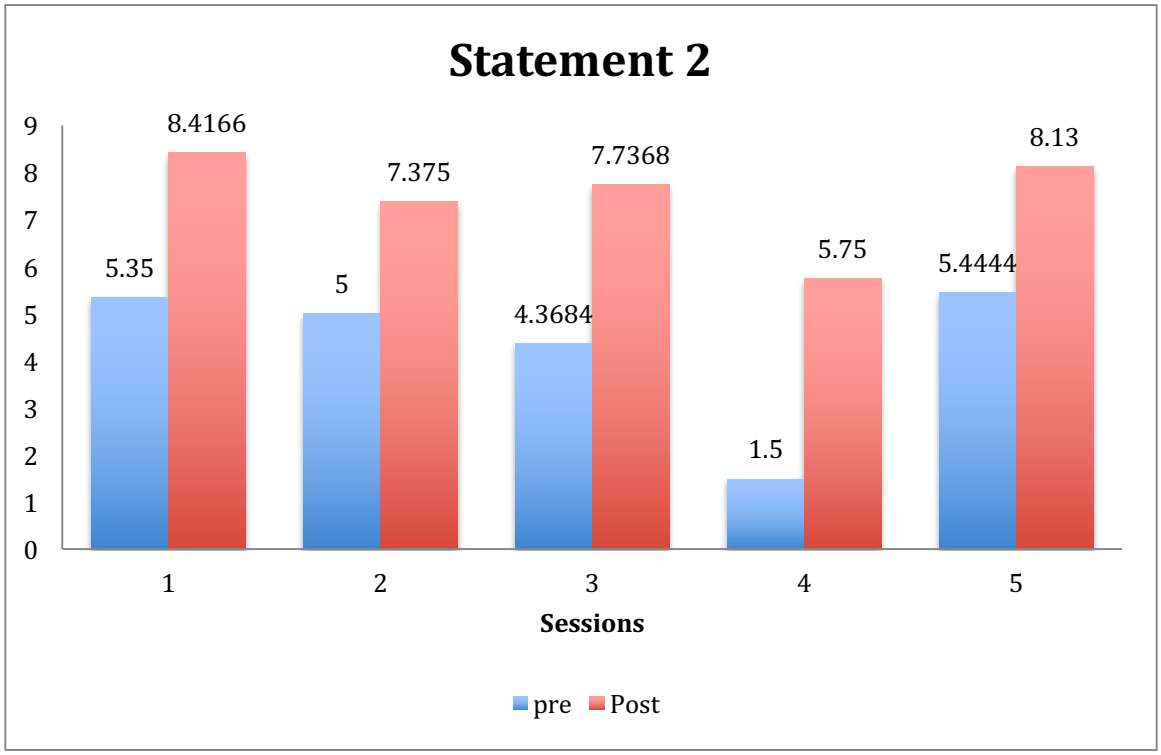
5.375
4
8.7826
7.2222
1
2
3
4
5
Sessions
pre
Post

Figure 9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5
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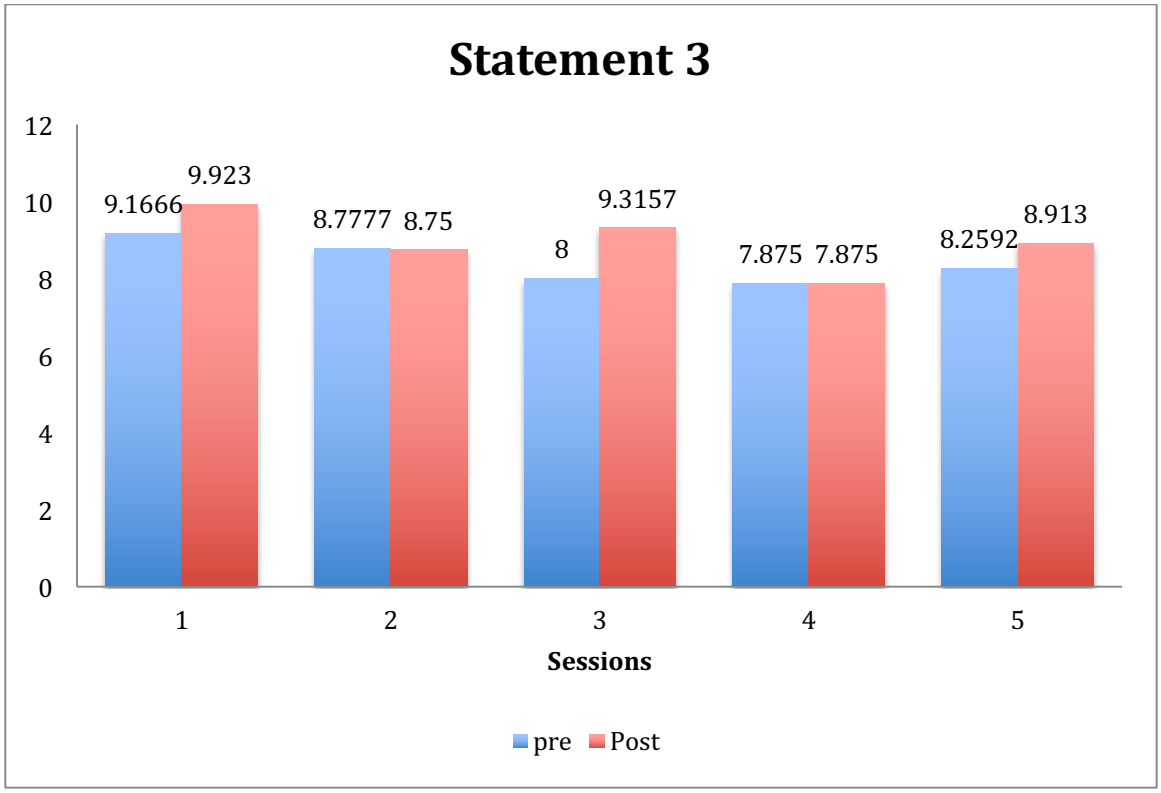
1.5
5.4444
1
2
3
4
5
Sessions
pre
Post

Figure 10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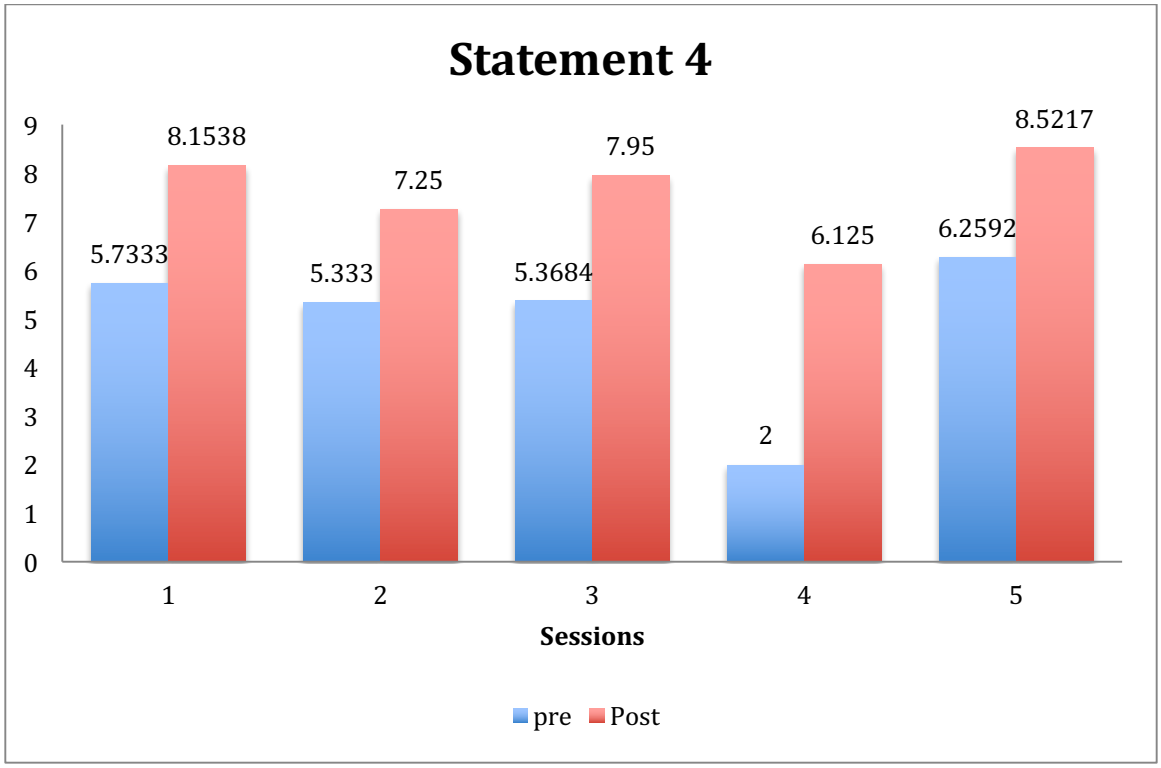
8.913
1
2
3
4
5
Sessions
pre
Post

Figure 11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2
6.125
6.2592
8.5217
1
2
3
4
5
Sessions
pre
Post

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