



ADVISORY REPORT ON BEHALF OF BOXING SISTERS

COMMIT TO BE FIT!

HOW TO MOTIVATE MEMBERS TO REGULARLY ATTEND
BOXING CLASSES

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MELISSA WARMERDAM
S1081992
WORDCOUNT: 1985

INTERNAL SUPERVISOR
DANIELA BECKER
EXTERNAL SUPERVISOR
LUC VAN KRIMPEN

RELEVANCE

Worldwide, 1 in 3 women are insufficiently physically active, leading to increased risks of heart diseases, diabetes, cancer, overweight and hypertension¹. Boxing Sisters aims to motivate women to be physically active by offering 8-week boxing courses exclusively for women. Through boxing, Boxing Sisters empowers women to feel physically and mentally stronger. Women start motivated, but there is a drop in class attendance starting in week 4 (see Figure 1). Boxing Sisters asked me to investigate the causes of the drop in bookings and to provide recommendations on how to stimulate members' attendance.

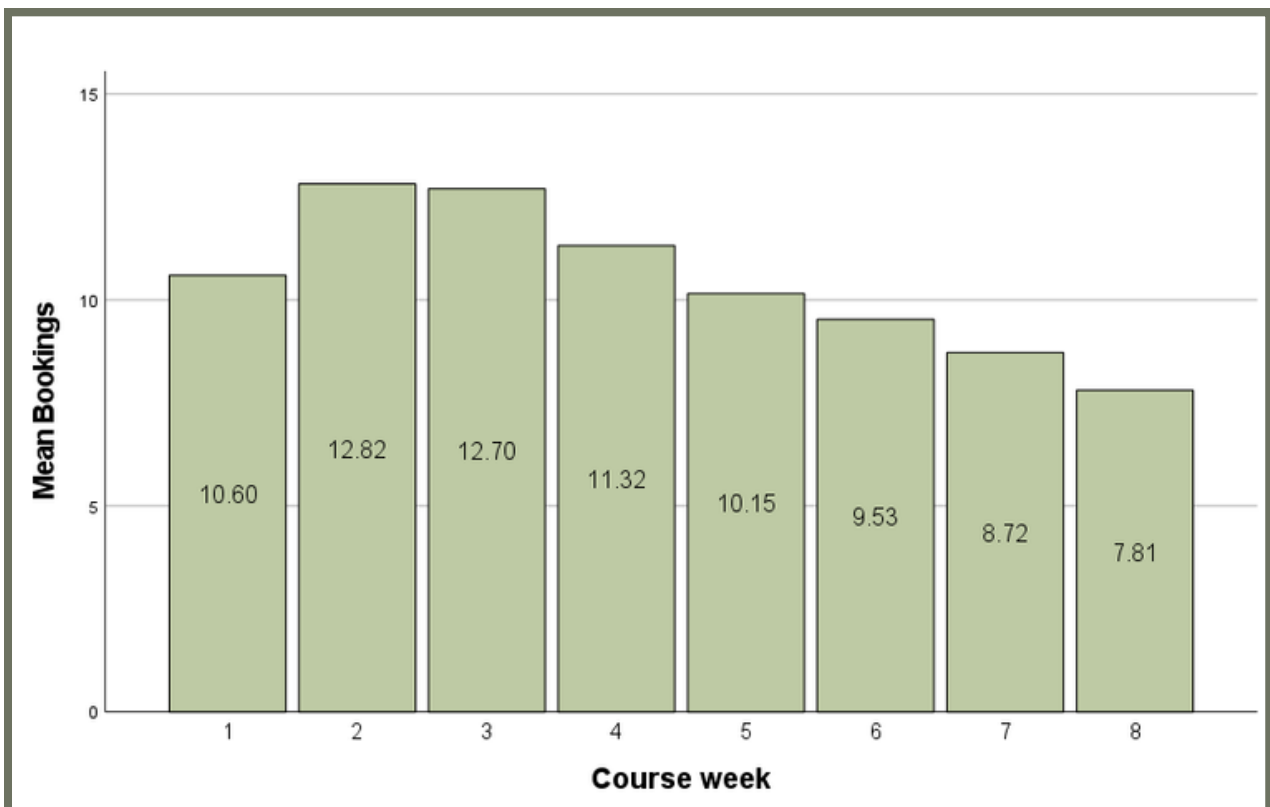


FIGURE 1 Visualization of the mean amount of bookings (per day) in each week of the course. The data encompasses all locations in Germany, Austria, Switzerland, and Scandinavia from 05.09.2022 till 05.03.2023.



CONTEXT

National health care costs have increased over the past years.² Physical inactivity contributes 1-3% to global healthcare costs.¹ Therefore, it is important that women become and stay physically active as this reduces the risk of getting non-communicable diseases. Research shows that sports reduce symptoms of anxiety and depression, improve mood, sleep and quality of life.³ Boxing also leads to stress reduction and weight loss, plus it improves self-esteem and people's ability to concentrate.³



To give Boxing Sisters insight into the causes of the drop in bookings, I investigated the psychological factors influencing the decision-making process to follow boxing classes. Insight into these factors and how these factors can be influenced can help Boxing Sisters to stimulate members' attendance. The recommendations are based on scientific literature and my own research.



STUDIES & RESULTS

Based on the Theory of Planned Behaviour (TPB)⁴ and the Value Based Choice Model (VBCM)⁵ factors influencing the decision-making process to follow boxing classes are aggregated in a process model. In study 1 this process model is validated. Thereafter this model is used to develop an intervention in study 2.

STUDY 1

The TPB states that intention is the best predictor of behaviour.⁴ When behaviour doesn't occur automatically, behaviour is always preceded by intentions. In the exercise domain, the predictive value of intentions is lower than in other domains, which is probably caused by the complexity of health-relevant decisions.

The VBCM explains the complexity of health-relevant decisions. This model states that health-relevant decisions appear as a choice between a behaviour that promotes a high-level goal and a competing behaviour that satisfies a low-level goal or impulse.⁴ Following a boxing class serves the high-level goal of getting healthier, while not following the class serves the low-level goal of saving time and energy. At the moment of decision-making, these two options are evaluated. The option with the highest value will be executed.

Based on these theories I developed and validated the following process model in study 1 (see Figure 2).

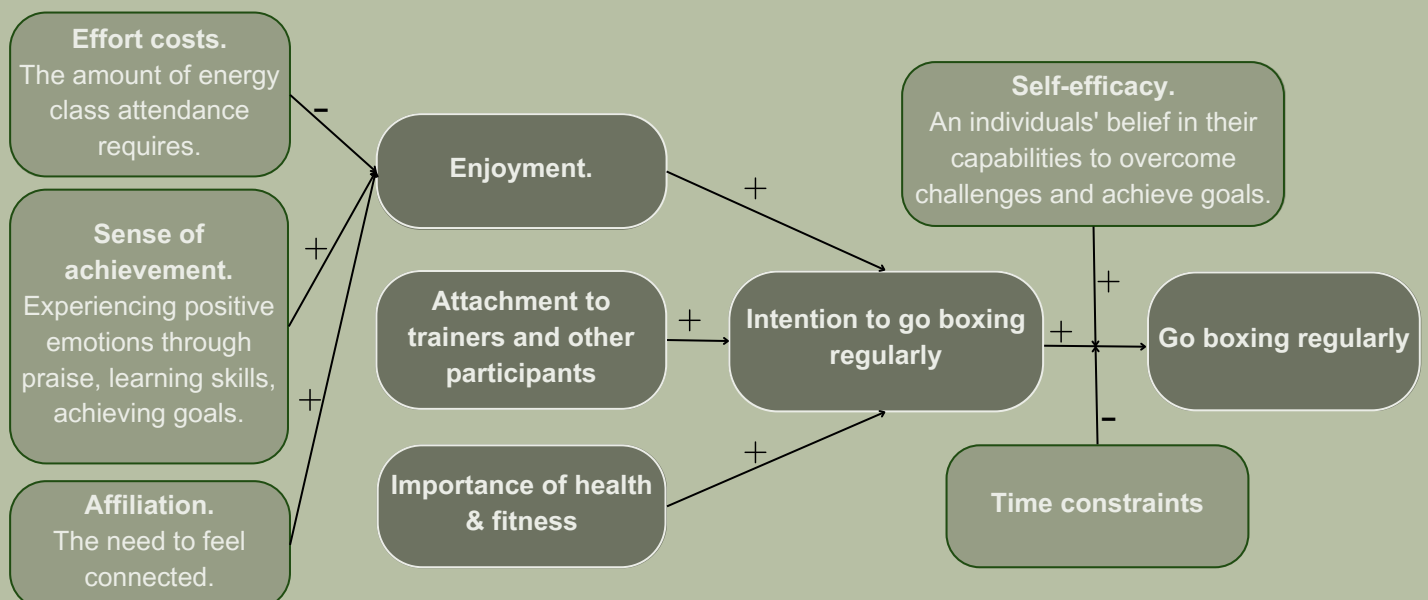


FIGURE 2 PROCESS MODEL

To validate the process model, I sent out an online questionnaire to which 706 women responded.

RESULTS

- Intention explains a small proportion of variance (26,2%) in behaviour.
- The influence of 'enjoyment', 'attachment' and 'importance of health and fitness' on 'intention' is supported.
- 'Effort costs' and 'sense of achievement', but not 'affiliation', have a significant effect on 'enjoyment'.
- Effects of 'self-efficacy' and 'time constraints' were difficult to judge.




STUDY 2

In study 2 an intervention is carried out to influence members' behaviour to regularly attend boxing classes. I used reminder emails at the beginning of weeks 3, 5 and 7.

Reminders simplify the steps to take action, increase salience, prevent forgetfulness, and motivate to follow through with **intention**^{8,9}. The first part of the reminder contained positive feedback about members' assumed performance up until that point (e.g. 'congratulations with completing your first classes'). Next, the reminder tried to activate the prevalent goals **enjoyment**, **importance of health and fitness** and **sense of achievement**. This was done by implying that the (presumably followed) classes function as a tool to achieve members' assumed goals (e.g. 'you're a step closer to getting better at boxing'). In the last part, members could indicate if they already scheduled their classes, wanted to schedule these straight away or didn't have time this week.

English version down below! [Having trouble reading this email? Click here.](#)



Hey [First Name],

Herzlichen Glückwunsch dass du deinen ersten Kurs absolviert hast! Du bist einen Schritt näher im Boxen besser zu werden. Lass uns einen Termin für deine nächsten Stunden absprechen!

Das habe ich schon getan 😊

Ich werde es gleich einplanen 🗓️

Ich habe diese Woche keine Zeit 😞

RESULTS

- There is no significant difference in class attendance during the 8-week boxing course between the intervention and control group.
- Class attendance remains higher in the first 4 weeks than in the last 4 weeks in both groups (see Figure 3).

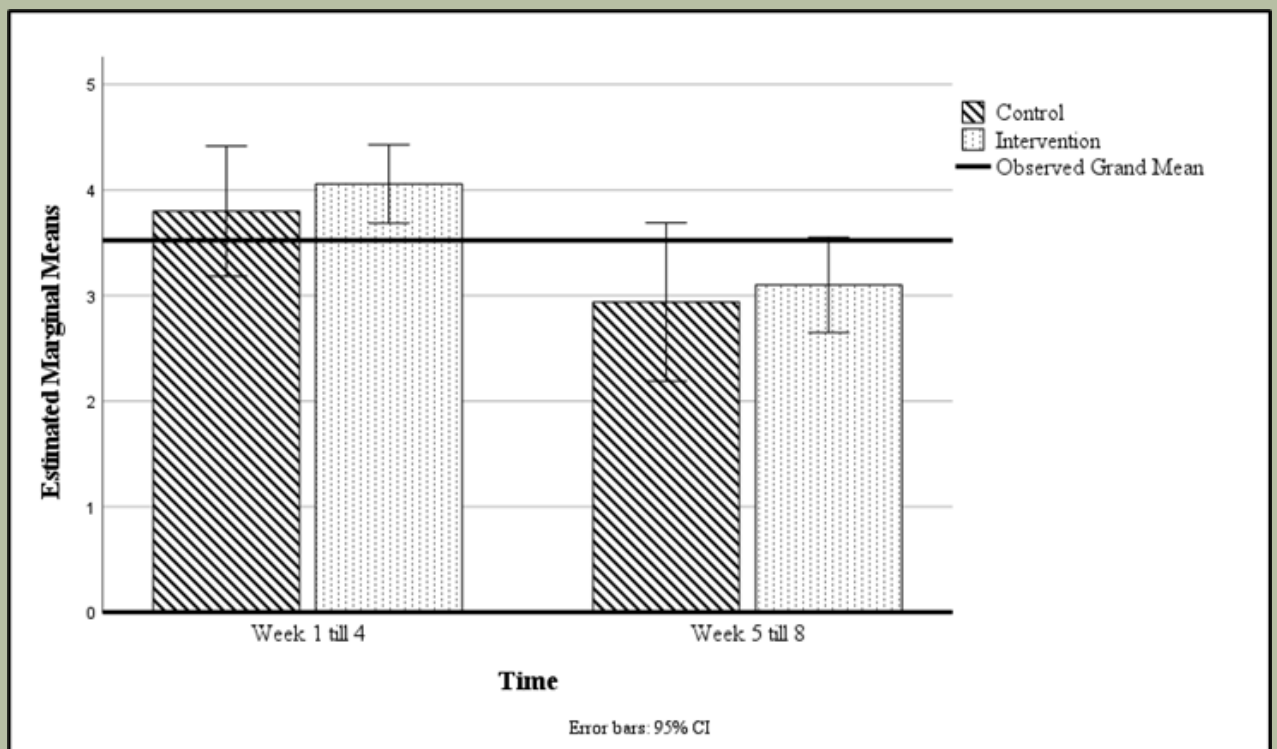


FIGURE 3 Visualization of the results in Study 2.

RECOMMENDATIONS

When a conscious decision-making process is involved, behaviour is always preceded by intention⁴. Stronger intentions have a higher chance of being executed. Hence, my first recommendation focuses on **stimulating members' intentions**.

Intention explains 26,6% of the variance in behaviour. So even strong intentions will not always lead to behaviour: the **intention-behaviour gap**⁸. Bridging this gap is the focus of my other recommendations.

To bridge the intention-behaviour gap, study 2 implemented reminders. Results showed the reminders to be ineffective. However, it is assumed that other factors influenced these results. Therefore, my second recommendation explores **alternative strategies for utilizing reminders effectively**.

The third recommendation is to **create concrete intentions** by employing implementations intentions that are specifically designed to bridge the gap⁹. My fourth recommendation focuses on **enhancing self-efficacy** as previous research confirmed its importance in influencing intentions and behaviour.^{7,10,11}

1

Fuel members' intentions with enjoyment and attachment.

2

Use effective reminders to bridge the intention-behaviour gap.

3

Create concrete intentions to bridge the intention-behaviour gap.

4

Enhance members' self-efficacy to bridge the intention-behaviour gap.

1

FUEL MEMBERS' INTENTIONS WITH ENJOYMENT AND ATTACHMENT

FINDINGS

Study 1 showed enjoyment and attachment as important factors influencing the intention to follow boxing classes. In study 1 members scored highly in both enjoyment ($M=6,35$ on a 7-point scale) and attachment ($M=5,14$ on a 7-point scale).

WHY?

Members have stronger intentions if they experience enjoyment and attachment to trainers and other members. Stronger intentions have a higher chance of being executed.¹² Therefore, it is important to stimulate intentions with positive factors.



HOW?

The high scores indicate that Boxing Sisters is successful in creating enjoyment and attachment. Members experience **enjoyment** from boxing itself, positive experiences and a safe and comfortable environment. Therefore, it is advised to continue investing in this positive environment and focus on the strengths of training together. **Attachment** can be maintained by personal contact between trainers and members.

Shared experiences within a community increase enjoyment and attachment.¹³ This community feeling is an important value of Boxing Sisters. Organizing activities like theme classes (e.g. ABBA night) or special classes where experienced members guide newer ones, can boost the community feeling.

The following suggestions might also increase attachment:

- Greet every member upon entry.
- Encourage partner swapping during lessons so that members get to know each other better.
- Offer exercises that involve all members and create a team achievement.

Finally, I advise including members' input since recognition creates a feeling of belonging.¹³ Boxing Sisters can receive members' input by:

- an end of the course evaluation.
- an active communication channel that facilitates interaction and information sharing among members and Boxing Sisters.
- a social media channel that posts celebrations like the 8-week certificate presentation.

Being part of a community increases enjoyment and attachment, creating stronger intentions to follow boxing classes as individuals feel supported, connected, and motivated to grow within the community.

2

USE EFFECTIVE REMINDERS TO BRIDGE THE INTENTION-BEHAVIOUR GAP

FINDINGS

Study 2 tested the effectiveness of reminders, but the results indicated their ineffectiveness. The chosen medium, email, can be easily overlooked or ignored. Furthermore, the reminders began with congratulating members on their assumed performance, which may have seemed insincere and impersonal to absent members.

WHY?

Research shows that reminders can be effective in the context of sports by bringing intentions to the top of members' minds.¹⁴ Reminders increase salience, serve as a cue to action and prevent forgetfulness. Moreover, reminders are easy to implement.^{14,15}

2

HOW?

Keep the reminders simple and focus on the intention to attend the boxing class! Make sure the reminder is straightforward, applicable and perceived positively by all members, regardless of their achievements.

Keep the reminders optional! When members enrol for the course, offer them the option to receive reminders. This might evoke a sense of Boxing Sisters' support and connection with its members.

Use the right communication channel! It is advised to use Virtuagym for sending reminders. A weekly reminder on Sunday helps members to schedule their classes for the upcoming week. Besides a reminder a day before every scheduled class, can positively affect actual class attendance. It would be best if the reminders pop up, so even when the app is closed, members receive a notification.

Reminders can enhance attendance by serving as gentle nudges to keep following the boxing classes at the top of members' minds.

3

CREATE CONCRETE INTENTIONS TO BRIDGE THE INTENTION- BEHAVIOUR GAP

FINDINGS

My research indicates that members struggle to translate their intentions into action which may be attributed to having abstract intentions such as "getting healthier".¹⁶

WHY?

Abstract intentions are hard to translate into actual behaviour, whereas concrete intentions are easier to achieve. People are more likely to attain intentions that are specific and feasible.^{9,12} Concrete intentions are measurable, while the achievement of abstract intentions remains unclear

3

HOW?

Use implementation intentions which are concrete action plans that specify the where, when and how of intentions.^{12,17} For instance, “*When I get home (where) from work at 5.30 pm on Monday (when), I will grab my gym clothes and cycle to the boxing gym (how)*”. Numerous studies demonstrate the effectiveness of implementation intentions.

By planning behaviour in advance implementation intentions shield intentions from distractions and create a strong link between a previous activity and a specific action, automating the response.⁹

Boxing Sister could post a message on Virtuagym with an explanation and example of implementation intentions to help members in their boxing journey. My advice is to post the message in the first week of the course so members have time to practice with their implementation intentions and can automate the behaviour. Besides, at the start of the course members are more conscious of their intentions. Below a possible message for Virtuagym is depicted.



3

HOW?

OFF TO A GREAT START

Welcome at Boxing Sisters!

Your boxing journey starts here! Whether your goal is learning how to box, doing something for your health or to just have fun: we're here for you.

Sometimes it can be hard to get yourself to the classes every time. This can be due to work, tiredness or other plans you scheduled. To prevent other factors from interfering with attaining your goals we like to help you with the use of implementation intentions.

Impleme... what?

Implementation intentions are concrete plans of action in which you describe when, where and how you want to achieve your goals.

For example: "When I get home (where) from work at 5.30 pm on Monday (when), I will grab my gym clothes and cycle to the gym (how)"

These concrete plans shield your goals from distractions and create a strong link between a previous activity and a specific action.

Take a look at your implementations each week, maybe adjust the day and time if your schedule changed and plan your classes directly in Virtuagym.

Additional tip: store your gloves in a visible place as a reminder!

Now you!

When I get back from [activity] at [time] on [weekday], I grab my gym stuff (and put on my gym clothes) and go by *bus/bike/car* to the boxing school for the [time] o'clock class.

FIGURE 4

By simplifying execution of the intended behaviour members are more likely to maintain regular class attendance.

4

ENHANCE MEMBERS' SELF-EFFICACY TO BRIDGE THE INTENTION-BEHAVIOUR GAP.

FINDINGS

While study 1 did not provide conclusive evidence regarding the effect of self-efficacy, previous research supports its importance in overcoming barriers⁶ and fostering beliefs about achieving goals.⁷

WHY?

Positive self-efficacy beliefs indicate having confidence in yourself and your capabilities.¹⁸ Self-efficacy varies per activity and situation. Since boxing is a new activity for the members, it is important to pay attention to their self-efficacy beliefs in this area so they keep on attending the classes.

Self-efficacy beliefs are shaped by various sources of information with *one's own performance experience* being the most influential.¹⁸ Perceptions of successful experiences strengthen self-efficacy. *Verbal persuasion* (this is what others suggest about one's abilities and probability of success) also impacts self-efficacy beliefs. The trustworthiness and expertness of the source affect the magnitude of persuasiveness.

4

HOW?

Educate trainers to positively contribute to members' self-efficacy. Teach trainers to give compliments, highlight achievements and create successful experiences.

Compliments focus on strengths and positive qualities. Trainers should verbally persuade members that they possess the capabilities to master the activities, motivating them to invest greater effort (whilst increasing motivation and commitment).¹⁹ Furthermore, trainers can create *success experiences* by paying attention to each class's difficulty and making members attentive to their achievements.

To enhance self-efficacy, my advice is to expand the training program for trainers, equipping them with the necessary skills. These skills can best be educated by a professional in this field.

The most effective way of creating a strong sense of self-efficacy is through mastery experiences.

TAKE-AWAY

Fuel members' intentions with enjoyment and attachment by creating a community.

Organize activities and encourage members' input.

1



2

Use effective reminders to bridge the intention-behaviour gap.

Offer reminders as pop-ups in Virtuagym.

Create concrete intentions to bridge the intention-behaviour gap with the use of implementation intentions.

Provide guidance for members to develop concrete action plans.

3

Enhance members' self-efficacy to bridge the intention-behaviour gap by equipping trainers with the necessary skills.

Educate trainers to give compliments, highlight achievements, and create successful experiences.

4

Implementing these recommendations aims to strengthen members' intentions, bridge the intention-behaviour gap, and promote regular class attendance, **resulting in Boxing Sisters who are committed to be fit!**

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