



Evidence-Based Physical Activity Coaching: An Academic Co-Creation



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Preface

This open educational resource is the product of an academic co-creation led by Julia Hussien and funded by the University of Ottawa's Library Open Educational Resource Grant (2024).

The research team consisted of the following members:

Project Lead: Julia Hussien (JH; jhussien@uottawa.ca)

Professor Collaborator: Jennifer Brunet (JB)

Student Collaborators: Jeff Marr (JM; student lead), Liza Khodko (LK), Dana Abozmal (DA), & Haley Ong (HO)

This resource is divided into four main parts:

Part One: JH and JB designed an assignment for JB's APA2140 Introduction to Sport and Exercise Psychology course. The assignment required students to work in a group of 4 and roleplay as physical activity coaches at a community center. Students were tasked with designing a case study that included an initial client intake form, an evidence-based plan to improve that client's physical activity (by incorporating a theory or model of behaviour change and course lecture content), and recommendations to the client in layman's terms. The assignment instructions, rubric, peer evaluation survey and outline are provided for future use.

Part Two: JH and LK created a summary of five key theories and models of behaviour change (i.e., Health Belief Model, Social Cognitive Theory, Self-Determination Theory, Transtheoretical Model, and Theory of Planned Behaviour). The summaries include an overview and key constructs of each theory/model, as well as an example of its' application in a real-world example.

Part Three: JM, DA, and HO created 10 case study examples (two for each theory/model) using the assignment instructions, rubrics, and outline from Part One as a guide. The case studies were reviewed and edited by JM, JH and JB to ensure they accurately reflected the theory/model and class lecture content.

Part Four: Students enrolled in APA2140 at the University of Ottawa in Fall 2024 completed the group assignment from Part One as part of their course requirements. They were provided with all the documents from Parts One to Three and asked if they wanted their group submission considered for publication in this open educational resource. The 14 case study examples provided in this part are exemplary submissions by the students and were approved by the student authors for publication in this resource. The content of these submissions has **not** been edited by the research team. Student authors for each submission are attributed.

Part One: The Physical Activity Coaching Group Assignment

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Physical Activity Coaching Group Assignment Instructions and Rubric

This is a GROUP assignment to be completed in groups of 4 students.

You must register your group in 2 locations:

- 1) By **Month Day, Year at Time** all group members must have entered their name AND email address under your chosen group number within this google drive document. Anyone not enrolled in a group by this date will be automatically put into a team with available space.
- 2) Every group member must also **enroll within your group number** on Brightspace. All members in your group will receive the same mark by the teaching assistant and you will only receive a mark if you are enrolled with your group members. **Ensure the group number you enroll in on Brightspace matches the group number you registered under on the google drive document.**

Library Open Educational Resource (OER) Grant

To support your completion of this assignment, you will be provided with an open educational resource consisting of 3 parts:

Part 1: The first part includes descriptions of five key theories and models of behaviour change (Health Belief Model [HBM], Social Cognitive Theory [SCT], Self-Determination Theory [SDT], Transtheoretical Model [TTM], and Theory of Planned Behaviour [TPB]).

Part 2: The second part includes two case study examples for each theory/model to demonstrate how a physical activity (PA) coach may use that theory/model to identify factors that may hinder or support an individual's PA and then make evidence-based recommendations around these factors to increase the individual's PA.

Part 3: The third part includes 10 assignments (two for each theory/model) completed by previous students. These submissions have **not** been edited by the team who created the OER. Instead, they are meant to be examples of exemplary student submissions.

Group Assignment Background Information

You have been hired as a physical activity (PA) coach alongside three other PA coaches at your local community center and within your interview, you shared that you had taken this course (APA2140) and have a strong understanding of evidence-based PA promotion as well as the factors that may hinder or support people's PA. Now, your manager wants you and the three other PA coaches to work as a group to run the PA coaching program. For new clients, you and your group are required to: (1) perform an initial intake form to capture the client's PA background and goals, (2) create an evidence-based plan to increase the client's level of PA, and (3) propose written recommendations on how the client can increase their PA, which the client can understand easily.

Your Group Assignment

As a group of PA coaches, you will *pretend* to perform an initial intake interview with a new client. **As a first step, come up with information within your group** to complete the client intake form below with details about your pretend client seeking PA coaching. (*Note. This is an important step because the details you include in this form will lay the groundwork for your theory/model incorporation and recommendations that follow. Make sure you are thorough i.e., if something is brought up during the rest of the assignment it should first be presented here*).

New Physical Activity (PA) Coaching Client Intake Form (~ 1 to 1½ pages double spaced; **not** included in 4 page limit)

Name:	
Age:	
Self-reported gender:	
Cultural background:	
Past PA involvement /experiences:	
Self-reported barriers to PA:	
Motivating factors for PA:	
Social influences:	
Current PA involvement:	
PA goal(s):	

As a second step, your group needs to create an evidence-based plan to help the client increase their PA motivation and behaviour based on the information you included in the intake form (~ 2 to 3 pages double spaced). This plan is an outline of what changes will be important to help your client increase their PA by addressing factors that facilitate or hinder their PA involvement. You should also address what factors will be important to maintain their improved PA.

In creating this plan, you need to (following the outline):

1. Identify which theory/model of behaviour change your plan is based on;
2. Explain the relevant key constructs of your selected theory/model;
3. Incorporate content from **at least** three class lectures (see list below) from this semester.
Note. This content should match with the details you provided above in the client intake form. E.g., if discussing client's negative body image concerns it should be shared above as a barrier.
4. Incorporate content from **at least** two reputable sources (i.e., peer-reviewed journal articles or textbooks) that are **not** from this course.

Please select <u>one</u> from these five key models/theories of behaviour change: 1. Health Belief Model [HBM] 2. Social Cognitive Theory [SCT] 3. Self-Determination Theory [SDT] 4. Transtheoretical Model [TTM] 5. Theory of Planned Behaviour [TPB]	Please select <u>at least three</u> of these class lectures to pull content to incorporate into your response: 1. Personality in sport and exercise 2. Aggression and moral behaviour in sport 3. Leadership in sport and exercise 4. Stress, emotion, and coping in sport and exercise 5. Anxiety in sport and exercise 6. Group cohesion in sport and exercise 7. Social influences on exercise 8. Youth involvement and positive development in sport 9. Coaching psychology 10. Aging and involvement in sport and physical activity 11. Physical activity and mental health 12. Body image in sport and exercise 13. Self-esteem, self-concept, and exercise
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As a third and final step, your group must provide **5 to 7** brief (i.e., 1 - 2 short sentences/lines) recommendations (worded for delivery to the client) your pretend new client can consider in order to increase their PA behaviour (~ ½ to 1 page). These recommendations need to reflect the constructs embedded in the theories/models that you selected *and* align with the plan you elaborated on with your group as PA coaches. These recommendations should **not** prescribe specific types of PA/activities that need to be done (e.g., start riding a bike) and should instead focus on ways they can increase PA based on their preferences and needs while providing examples. These recommendations should be in **layman's terms** meaning they are presented in

simple, easy to understand language that could be understood by most people. As well, these recommendations do **not** need to elaborate on the theoretical basis for the recommendation.

General Guidelines

Please read carefully

- This group assignment is to be done in **teams of 4** and all group members must register in your group on the google doc AND in the matching group number on Brightspace by end of day on **Month Day, Year**.
- The deadline to submit your group assignment on Brightspace is **Month Day, Year by Time** and only **1 member** of your group will submit.
- **This group assignment is worth 20% of your final grade.** It will have a component evaluated by the teaching assistants (17%, see rubric on next page) that all group members receive the same mark on, as well as a peer evaluation component (3%) that may differ depending on how your peers evaluate you.
- Your submission must indicate whether or not you wish for your submission to be considered for publication in the **OER** (see first page above for instructions).
- As a guideline, your assignment (i.e., new client intake form, evidence-based plan, and client recommendations) should be **3½ - 5 pages** (not including the title page and reference list). Your evidence-based plan and client recommendations together **cannot exceed 4 pages (anything past 4 pages will not be marked)**.
- Your work **must** be double-spaced, 12-point Times font, with 1 inch (2.54cm/normal) margins.
- Use content from throughout the course (**from at least 3 lectures**) to bring in relevant information into your answer.
- Keep in mind, it may be easier to work backwards to create your client based on content you wish to include based on your selected theory/model and class content. It is helpful to go back and forth between the intake form and plan you create to ensure the content presented in both matches up and isn't missing from one or the other.
- Ensure ideas presented in the recommendations to the client have already been presented in the second step (PA plan), i.e., the recommendations section should **not** be the first time a new idea is presented.
- Provide supporting detail with references other than the course textbook/notes to support your answer. Must have **at least 2 references** from reputable sources (i.e., articles from peer-reviewed journals or textbooks).
- Use **APA 7th edition** citation format in text and within reference page.
https://owl.purdue.edu/owl/research_and_citation/apa_style/apa_formatting_and_style_guide/general_format.html
- See Brightspace document titled “PA Coaching Group Assignment Outline” for how the assignment **must** can be formatted/presented.

Remember, to support you in the completion of this assignment, you will have access to descriptions of the five models/theories of behaviour change, and 20 example case studies designed using the instructions for this assignment (10 created by the OER research team and 10 student submissions).

Assignment Section	Section Component	Level 5	Level 4	Level 3	Level 2	Level 1
Intake Form (4 marks)	Intake form completeness (2 marks)	All components of the intake form are complete	Most components of the intake form are complete	Many components of the intake form are complete	Some components of the intake form are complete	Few components of the intake form are complete
	Intake form details (2 marks)	Includes all the details elaborated on in client PA plan	Includes most details elaborated on in client PA plan	Includes many details elaborated on in client PA plan	Includes some details elaborated on in client PA plan	Includes few details elaborated on in client PA plan
Evidence-Based Plan to Increase Client's Physical Activity (PA) Motivation and Behaviour (9 marks)	Theory/Model description (2 marks)	All relevant components of the selected theory/model are clearly defined in your own words	Most relevant components of the selected theory/model are clearly defined in your own words	Many relevant components of the selected theory/model are clearly defined in your own words	Some relevant components of the selected theory/model are clearly defined in your own words	Few relevant components of the selected theory/model are clearly defined in your own words
	Theory/Model application (2.5 marks)	All described components of the selected theory/model are applied clearly and accurately	Most described components of the selected theory/model are applied clearly and accurately	Many described components of the selected theory/model are applied clearly and accurately	Some described components of the selected theory/model are applied clearly and accurately	Few described components of the selected theory/model are applied clearly and accurately
	Course content knowledge and application (2.5 marks)	Demonstrated a deep understanding and consistently accurate application of content from 3+ course lectures	Demonstrated a deep understanding and often accurate application of content from 3+ course lectures	Demonstrated a deep understanding and consistently accurate application of content from 2 course lectures	Demonstrated a deep understanding and often accurate application of content from 2 course lectures	Demonstrated a deep understanding and accurate application of content from only 1 course lecture
	Supporting details from external sources (2 marks)	Excellent use of 2+ relevant supporting references	Very good use of 2+ relevant supporting references	Good use of 2+ relevant supporting references	Excellent/Very good use of 1 relevant supporting reference	Good use of 1 relevant supporting reference
Recommendations to Client (3 marks)	Recommendations to client (3 marks)	5+ that are simply worded and align with evidence-based plan to increase client's PA	4 that are simply worded and align with evidence-based plan to increase client's PA	3 that are simply worded and align with evidence-based plan to increase client's PA	2 that are simply worded and align with evidence-based plan to increase client's PA	1 that is simply worded and aligns with evidence-based plan to increase client's PA
Referencing (1 marks)	APA 7 th edition (1 marks)	Zero to 1 type of error in text and reference section	2 – 3 different types of errors in text and reference section	4 – 5 types of errors in text and reference section	6 – 7 types of errors in text and reference section	8+ types of errors in text and reference section

Total (Teaching assistant evaluation component only) = /17 marks total

PA Coaching Group Assignment Peer Evaluation Survey

* Please enter YOUR full name

FIRST name

LAST name

* What is your group number?

In the following questions you will be asked to evaluate your peers in the group assignment (out of 3%). You must evaluate all 3 of your group members, however, the order does not matter as long as their full name is included.

When assigning your evaluation please consider their:

Collaboration: did they contribute equitably to the work, actively participate in identifying tasks to be carried out, propose solutions, and participate in decisions?

Attitude: did they maintain a positive and constructive attitude towards work and did they remain respectful towards other members?

Responsibility: were they responsible, autonomous, and did they take initiative?

Communication: did they express themselves clearly in all situations?

Creativity: did they propose ideas and gives different points of view?

Diligence-Punctuality: did they carry out each stage of the work according to deadlines?

* What is the first and last name of your **first** group member?

* What mark (out of 3%) would you assign to the **first** group member after considering all the criteria above?

* What is the first and last name of your **second** group member?

* What mark (out of 3%) would you assign to the **second** group member after considering all the criteria above?

* What is the first and last name of your **third** group member?

* What mark (out of 3%) would you assign to the **third** group member after considering all the criteria above?

The evaluations received for each student from their peers will be averaged and your final mark for this component of the group assignment will be uploaded in the Brightspace grades tab. Thank you for taking part in this process and we hope that the resources provided were helpful along your journey.

PA Coaching Group Assignment Outline

Before going through this outline, see the document titled “PA Coaching Group Assignment Instructions and Rubric” for all details related to the library open educational resource that has been designed to support this course, as well as the group assignment components, guidelines, and rubric.

The following is an outline of how the group assignment must be presented. The text highlighted in yellow (which may provide additional instructions) is where you will enter your own details.

Make note of comments that provide additional information.

Be sure to respect section lengths so that the evidence-based plan and client recommendations together **do not exceed 4 pages total**. Anything beyond this limit will **not** be evaluated; **the title page, new client intake form, and reference list are not included in the 4-page limit**.

This page should be removed from your final group assignment submission.

Title Page (1 page double spaced; **not included in 4-page limit)**

Course Code:

Professor:

Date: *Fill in.*

Student names and Student numbers: *Fill in.*

**New Physical Activity (PA) Coaching Client Intake Form (~1 to 1½ pages double spaced;
not included in 4-page limit)**

Name:	<i>Fill in.</i>
Age:	<i>Fill in.</i>
Self-reported gender:	<i>Fill in.</i>
Cultural background:	<i>Fill in.</i>
Past PA involvement /experiences:	<i>Fill in.</i>
Self-reported barriers to PA:	<i>Fill in.</i>
Motivating factors for PA:	<i>Fill in.</i>
Social influences:	<i>Fill in.</i>
Current PA involvement:	<i>Fill in.</i>
PA goal(s):	<i>Fill in.</i>

Selected theory or model of behaviour change: *Fill in theory/model title. i.e., Health Belief Model [HBM], Social Cognitive Theory [SCT], Self-Determination Theory [SDT], Transtheoretical Model [TTM], OR Theory of Planned Behaviour [TPB].*

Content integrated from selected course lectures (at least 3): *Fill in lecture titles. i.e., Personality in sport and exercise. Aggression and moral behaviour in sport. Leadership in sport and exercise. Stress, emotion, and coping in sport and exercise. Anxiety in sport and exercise.*

Group cohesion in sport and exercise. Social influences on exercise. Youth involvement and positive development in sport. Coaching psychology. Aging and involvement in sport and physical activity. Physical activity and mental health. Body image in sport and exercise. Self-esteem, self-concept, and exercise.

Evidence-Based Plan to Increase Client's Physical Activity Motivation and Behaviour (~2 to 3 pages double spaces; **included in 4-page limit)**

Fill in. This plan is an outline of steps that should be completed with your pretend client through a physical activity (PA) coaching program in order to increase their PA motivation and behaviour; as you have only just begun with this client, you will not have all the answers on how to increase their PA just yet. The goal of this plan is to show that you understand what factors should be considered when coaching someone to increase their PA and that there is no one size fits all approach.

*The steps in your plan must align with (1) your selected theory/model of behaviour change, (2) the factors that would facilitate (i.e., act as a motivator) and the factors that would hinder (i.e., act as a barrier) an increase in your client's PA, and (3) the selected course content relevant to your pretend client. These steps should **not** include prescriptions to perform a specific type of PA (e.g., client should start biking 60 minutes/week) and should instead focus on getting the client to increase PA in a way that aligns with their preferences and goals while providing examples.*

*Ensure you explain the key constructs of your selected theory/model and how they apply to your new client in the PA coaching program. Incorporate content from at least **three** other class lectures and two external resources from reputable sources (i.e., peer-reviewed journal articles or textbooks that are not from this course).*

Recommendations to the Client (5-7 recommendations; ~ ½ to 1 page double spaced; **included in 4-page limit)**

Note. these should be worded to the client as they will be the one receiving them and recommendations do not all have to be directly specific to physical activity. Instead, they can include ways of overcoming barriers or increasing motivators for physical activity.

1. *Fill in.* e.g., You should...
2. *Fill in.* e.g., Consider....
3. *Fill in.*
4. *Fill in.*
5. *Fill in.*
6. *(optional)*
7. *(optional)*

References (not included in 4-page limit)

Fill in all references cited in APA 7th edition.

Part Two: Theories and Models of Behaviour Change

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Health Belief Model

Imagine knowing that a single decision could protect you from a significant health risk – would you act? Or would doubts hold you back?

Overview

The Health Belief Model (HBM) aims to explain and predict health behaviours based on **individual** beliefs/perceptions of both the threat of an illness or disease AND the effectiveness of a proposed behaviour to reduce that threat (Goodpaster et al., 2010). This model suggests that personal motivation to engage in a health behaviour is influenced by individual's perceptions, which in turn shape behaviours and the likelihood of acting (Min & Oh, 2014). Importantly, this model was developed to predict a single instance of a specific behaviour (Hochbaum, 1958).

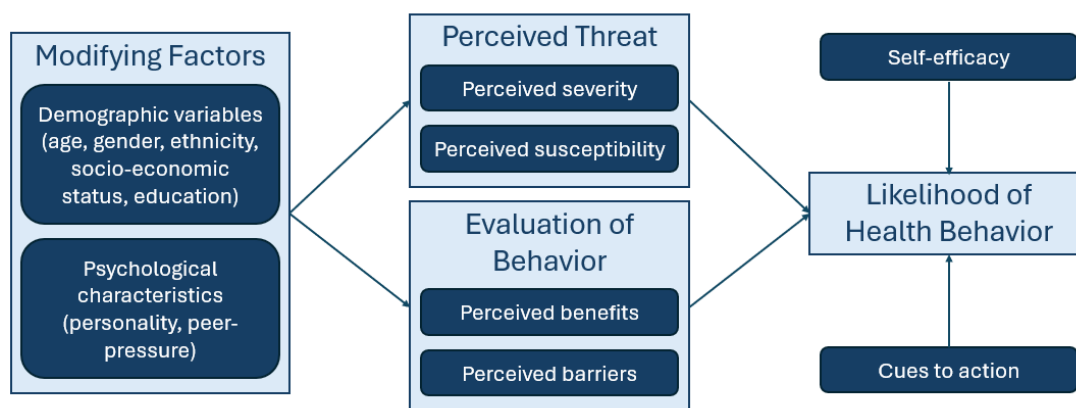
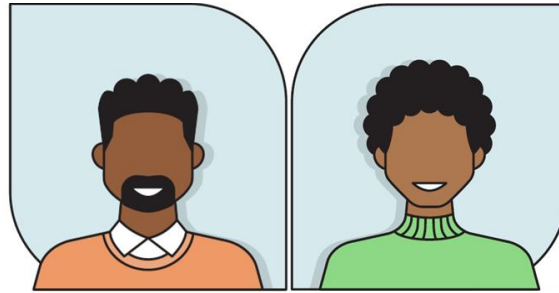


Figure 1. Illustration of the Health Belief Model. Adapted from Etheridge, Sinyard, and Brindle (2023).

Real-World Example

Meet James and Erick, both in their early 30s with a family history of high blood pressure.



James goes to his doctor where he learns he is showing early signs of high blood pressure. With his family history and increased risk because of his race, his doctor warns him that although he is a healthy weight now, he needs to improve his diet and begin engaging in more physical activity to reduce his chances of developing high blood pressure.

James knows that high blood pressure is a serious health concern and that he is at high risk of developing it. Also, he believes that physical activity will be an effective preventative measure. Between his work and his family, he doesn't have much time left to go to the gym or play sports, but he decides for the next week instead of driving, he would bike to his office.

Erick spends most of his weekend evenings drinking at various bars with his friends, followed by late night poutine and a next day spent mostly on the couch. His dad, who has high blood pressure, warns him that he needs to improve his eating and physical activity because his race, family history, and age all put him at higher risk of developing high blood pressure.

Erick doesn't think high blood pressure is that big of a deal and thinks he is still too young to worry about it. He tells his dad that while he knows physical activity would be good for his health, he doesn't have a lot of time and doesn't want to give up his lifestyle. He says that if he did develop high blood pressure, he would just take medication for it.

Key Components/Constructs

Modifying Factors

Modifying factors influence individuals' perception of the following HBM components (i.e., perceived threat, evaluation of behaviour and likelihood of health behaviour). **Demographic variables** (e.g., age, gender, ethnicity and socio-economic status, education, etc.) directly determine the individual's perceived threat. For example, an athlete that is younger, female, has a high socio-economic status, and lower education level will have a lower perceived threat of health risks compared to someone of the opposite demographic background (Jones et al., 2015; Glanz et al., 2008). **Psychological characteristics** (e.g., personality, social class, peer influence, cultural beliefs, etc.) also determine the likelihood of health behaviours by affecting how one interprets health risks and the benefit of acting. For instance, an individual who is shy or self-conscious may avoid physical activity altogether – especially if it requires them to be in social settings.

In the HBM, a person's health-related behaviour depends on their perception of four critical aspects organized into two categories:

1. Perceived threat
 - a. Perceived severity of a potential illness
 - b. Perceived susceptibility to that illness
2. Evaluation of the behaviour
 - a. Benefits of taking a preventive action
 - b. Barriers to taking that action

Perceived Threat

Perceived severity is one's belief about the seriousness of the consequences of a health problem or condition. The higher the severity of the perceived threat, the more likely the person is to take preventative action. For example, if an individual believes that concussions have serious consequences, they are more likely to engage in preventative actions such as avoiding contact sports and wearing protective equipment.

Perceived susceptibility refers to one's belief about the likelihood of experiencing a health problem or condition. If the person perceives themselves to be highly susceptible to a health problem, the more likely they are to engage in healthy (i.e., mitigating) behaviour (Muluaem et al., 2016). The opposite is true when the perceived risk is low. For instance, an athlete who has a history of joint/muscle injuries and believes that they are at higher risk of reinjuring themselves is more likely to engage in dynamic warm up prior to engaging in a physical activity or exercise.

Evaluation of Behaviour

Perceived benefits refer to one's belief in the effectiveness of the recommended actions to reduce risk or severity of health issue. The greater the perceived benefit, the more likely the person is to engage in the act (Tayel et al., 2019). For example, if an individual believes that engaging in physical activity will reduce their likelihood of developing or worsening a health condition (e.g., high blood pressure, cancer etc.), they are more likely to partake in physical activity.

Perceived barriers are one's assessment of obstacles or negative aspects (e.g., time commitment, cost, discomfort) of taking a recommended action. The higher the perceived barriers, the less likely the person is to partake in the necessary action. For instance, someone who wants to get a personal trainer but doesn't think they will have enough time to go to the gym and perceives the cost as too high likely will not go through with it.

Overall, to increase the likelihood of adaptive behaviour, the perceived benefits need to outweigh the perceived barriers (Mardani-Hamoooleh et al., 2010).

Likelihood of Behaviour

Self-efficacy is the individual's confidence in their ability to successfully perform the actions required to reduce risk or severity. It is the most important predictor of physical activity (Khodaveisi et al., 2021) since the higher the self-efficacy, the higher the likelihood of the person taking preventative action. For instance, an individual who suffered an injury going through a rehabilitation program is more likely to complete it if they believe they can do the hard work required to do so successfully.

Cues to action are triggers that encourage an individual to adapt behaviours that reduce health risks. These cues can be internal (e.g., subjective and objective symptoms) or external (e.g., advice from coaches, behaviours of those around us, events like health scare happening to others, or seeing/hearing national physical activity guidelines for adults). For example, if after every exercise workout, an individual feels sore for the entirety of the next day, this can act as an internal cue making them more likely to engage in cool down activities such as stretching to prevent the soreness in the future. Similarly, if an athlete's teammate gets injured, this can act as an external cue making them more likely to take preventative measures (i.e., wearing protective equipment) to avoid suffering the same fate.

Applying the HBM to Encourage Behaviour Change



Let's go back to Erick and see how the HBM can be applied to encourage him to engage in more physical activity to reduce his chances of developing high blood pressure.

<u>Four critical aspects</u>	<u>Erick's perceptions and how to apply the HBM to modify them</u>
<i>Perceived severity of a potential illness</i>	<u>Thinks high blood pressure is "no big deal"</u> <u><i>HBM suggestion to make him aware of the severity:</i></u> Provide him with reputable and educational resources that emphasize the negative impacts of high blood pressure (e.g., uncontrolled high blood pressure can lead to heart damage overtime). Using real life examples of people (potentially family members) can make this more relatable.
<i>Perceived susceptibility to that illness</i>	<u>Thinks he is too young to be worried about it</u> <u><i>HBM suggestion to make him aware of his susceptibility:</i></u> Ask Erick to complete an online quiz that determines one's personal risk of developing complications from high blood pressure. Afterwards, ask him how he thinks he will score and compare it to the score he got. This can encourage him to acknowledge his risk factors.

<i>Benefits of taking a preventive action</i>	<u>Knows physical activity is important for his health</u> <u><i>HBM suggestion to make him more aware of the extent of the benefits of physical activity:</i></u> Educate Erick that once high blood pressure is managed, quality of life will increase as the risk of heart attacks and strokes decreases.
<i>Barriers to taking that action</i>	<u>Doesn't have much time and doesn't want to give up his lifestyle of hanging out with his friends on the weekends</u> <u><i>HBM suggestion to mitigate some of these barriers:</i></u> Suggest combining physical activity and hanging out with his friends together. For example, instead of sitting around and listening to music, he can play pickle ball with his friends. This can help with adherence since it combines a meaningful activity (e.g., socializing with friends) with physical activity for Erick.

Conclusion

To sum up, the Health Belief Model (HBM) provides a structure for comprehending how personal beliefs and perceptions impact health-related behaviours. The HBM assists in explaining why people decide to take—or not take — certain health behaviours by considering elements like perceived vulnerability, severity, advantages, and barriers. Having a solid understanding of the HBM principles can help in detailing strategies to help individuals improve their health-related behaviours by targeting their four critical perceptions, improving their self-efficacy, and implementing cues to action.

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Social Cognitive Theory

What if your success in sport or physical activity wasn't just about your physical skills, but also about the powerful influence of the people and environments around you?

Overview

Social Cognitive Theory (SCT) aims to explain why we should pay attention to the fact that individuals are influenced by many factors, some of which reside outside of them. In addition to personal factors, an individual's ability to engage in activity is largely influenced by their relationships with others, organizational factors, and environmental factors. These factors influence each other within the framework and ultimately guide behaviour. This section will explore SCT's components, along with other core concepts (i.e., self-efficacy, observational learning, and reciprocal determinism).

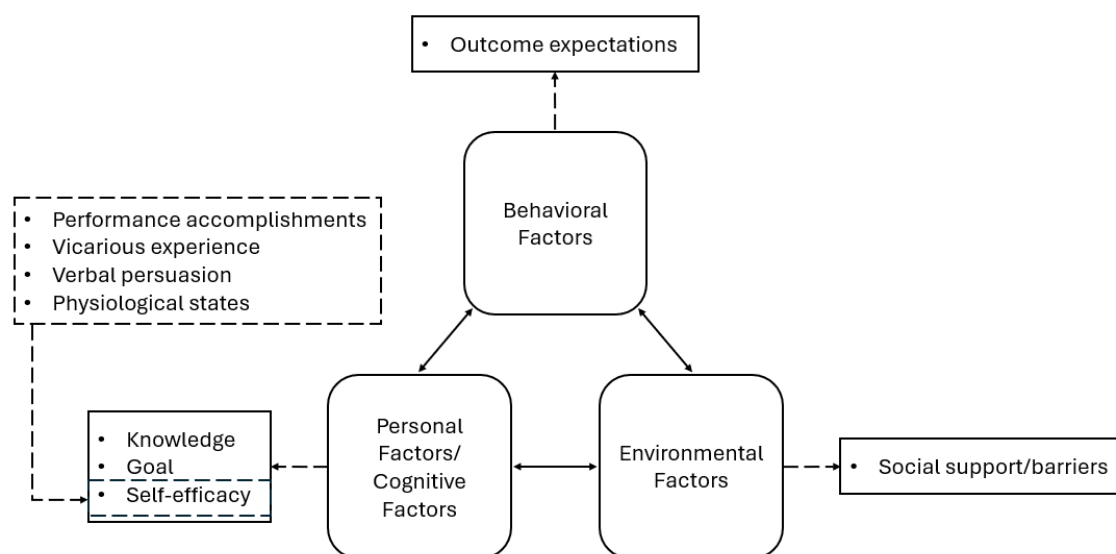


Figure 2. Illustration of Social Cognitive Theory determinants. *Adapted from Chin and Mansori (2018).*

Real-World Example

Meet John and Emily, both in their late 20s looking to engage in physical activity.



John has always wanted to run a half-marathon, but he wasn't confident in his ability to complete long-distance races. One day, he saw a colleague, who was once out of shape, complete a marathon. Inspired, John joined a running group where he could train with others. With regular encouragement from his running friends and a coach who provided personalized advice, John slowly increased his endurance. After each successful training session, his confidence grew. He also noticed improvements in his fitness and energy levels, which reinforced his belief that training was worth the effort. John learned from others' experiences, received verbal persuasion from his coach and peers, and managed his anxiety by breaking down the goal into smaller, achievable steps. After months of training, he successfully completed his first half-marathon.

Emily has a sedentary lifestyle due to her desk job and has long wanted to improve her fitness by engaging in regular physical activity. She often thinks about going to the gym or joining a sports league, but she feels overwhelmed by the idea. She has tried to exercise in the past but felt out of shape and struggled to keep up with others, which negatively impacted her confidence. Her self-doubt is reinforced every time she tries to work out and feels fatigued or discouraged, leading her to believe that she will never be fit. Additionally, Emily doesn't have a strong support system; her friends prefer sedentary activities like watching movies, and she often feels isolated in her fitness journey. When she feels stressed or fatigued from work, Emily tends to skip workouts, opting instead to relax at home, convinced that she can't manage to fit exercise into his busy life.

Key Components/Constructs

Intrapersonal factors are unique to the individual in question and are not necessarily outwardly visible to those around them. These factors influence self-efficacy, emotions, motivation, goal-setting, self-regulation, and self-perceptions (Bandura, 1997). For example, someone with high levels of motivation is more likely to attempt the actions (e.g., eat a healthy diet) required to achieve their goals (e.g., reduce the risk of type 2 diabetes) compared to someone with low motivation. Lastly, intrapersonal factors are not purely innate. While individuals may start with varying levels of given traits, they can be developed over time through experience, learning, and practice (Bandura, 1997).

Interpersonal factors involve the social interactions and relationships an individual has with others. In the case of an average person, they interact with co-workers, friends, and community and family members – all of whom can influence their behaviour for better or for worse. For instance, an individual surrounded by highly motivated friends who try to lead a healthy lifestyle is more likely to mimic their behaviour. This demonstrates the critical role of observational learning (discussed further in the next section). Furthermore, if the individual has high levels of motivation, combined with being surrounded by other highly motivated individuals, the likelihood of adopting positive behaviour increases even further (Bandura, 1997).

Organizational factors refer to the structures, rules, and cultures within institutions such as families, sports teams, companies, and communities (McAlister et al., 2008). These factors shape the environment in which individuals learn, work, and live. For instance, if a personal trainer values your feedback and actively seeks ways to improve, you are more likely to feel supported and perform better compared to someone who does not feel heard (McAlister et al., 2008).

Environmental factors include the broader physical and social contexts that influence behaviour (Bandura, 2001). For example, having access to a gym at no cost at work increases the likelihood of someone using it, and therefore, engage in physical activity. Reciprocal determinism implies that behaviour is shaped by and also shapes the environment (discussed further in the next section).

Overall, even though the various components of SCT may seem to be separate and distinct – there is mutual interdependence between them - e.g., intrapersonal factors will determine interpersonal factors and vice versa.

Core Concepts of SCT

Self-efficacy is an intrapersonal factor that refers to an individual's belief in their ability to carry out specific activities (Bandura, 1997) and is a critical factor in determining task-focused actions (Bandura, 2004). As previously mentioned, intrapersonal factors are not entirely innate and self-efficacy is built through mastery experiences, vicarious learning, social persuasion, and managing emotional states (Bandura, 1997). Figure 3 below illustrates how self-efficacy can influence behaviour both directly and indirectly. Before actively engaging in a behaviour, the task at hand is assessed in terms of difficulty, which in turn influences self-efficacy (Beauchamp et al., 2019). For instance, if the task is perceived as complex, one's self-efficacy may decrease, making them less likely to engage in the behaviour. However, due to unique intrapersonal factors (i.e., personal determination, previous experience, psychological state, outcome expectations, etc.), some individuals will still strive to complete difficult goals. Conversely, if the task is perceived as easy, self-efficacy will be high, providing the individual with the confidence necessary to complete the behaviour.

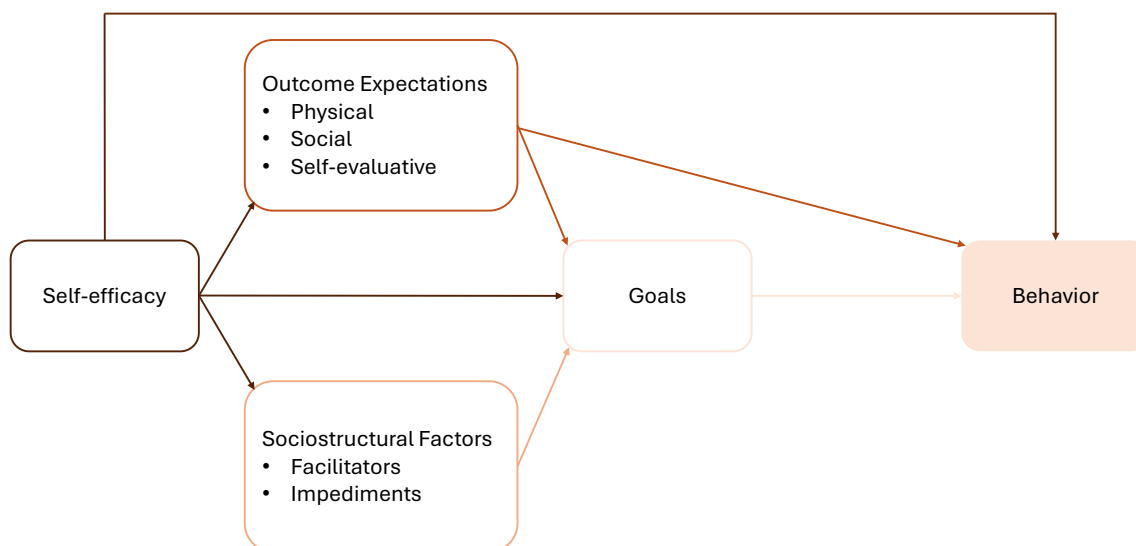


Figure 3. Direct and indirect influences of self-efficacy on behaviour. *Adapted from Bandura (2004).*

Definitions of intrapersonal factors that build up self-efficacy (Bandura, 1997):

<i>Mastery experiences</i>	The direct personal experiences of success in performing the task/behaviour. Example: Someone who was able to successfully swim 100m freestyle will likely feel confident about their ability to complete similar distances in the future.
<i>Vicarious learning</i> <i>(i.e. observational learning)</i>	A form of learning in which individuals learn from observing others and the consequences of their behaviour. Example: A novice weightlifter watching a peer weightlifter and in turn visualizing themselves lifting weights will likely feel confident about their ability to lift weights.
<i>Social persuasion</i>	The encouragement/feedback from others that can influence a person's motivation/self-efficacy to engage in behaviour. Example: A coach telling an athlete that they have the talent to succeed at a specific task in the sport will boost the athlete's confidence for that task, thereby increasing their motivation to keep training.
<i>Managing emotional states</i>	The regulation of one's emotions, stress and anxiety levels to improve performance and increase self-efficacy. Example: An athlete who can manage to stay calm and control their physiological responses during a close game is more likely to feel confident in their abilities, which will prevent their performance from being hindered.

Observational learning is an interpersonal factor that illustrates how individuals learn by observing others and modeling their (adaptive or maladaptive) behaviours (Bandura, 1986). This process involves four steps: **attention**, **retention**, **reproduction**, and **motivation**. For example, a novice basketball player may watch videos of elite players in hopes of improving their free-throw technique. After having the technique brought to their attention, they will remember it, try it for themselves, and feel motivated by the outcomes they observe. This type of learning is not simply imitating others' behaviour; the behaviour is observed and integrated into one's own skill set, which highlights the critical role of social environments and peers' behaviour (Bandura, 1986).

Reciprocal determinism suggests that behaviour is not solely determined by external factors but is also shaped through a feedback loop where individual thoughts, actions, and surroundings influence each other (Bandura, 1986). For instance, motivation levels (an intrapersonal factor) and the availability of a convenient gym (an environmental factor) together determine whether someone will engage in physical activity (behaviour). Likewise, one's performance or experience will influence their self-efficacy and the way those around them interact with them. Overall, reciprocal determinism explains the dynamic and continuous interaction between personal factors, environmental influences, and behaviour – when one of these elements changes, it can produce changes in the other two (Bandura, 1986).

Outcome expectations refer to one's beliefs about the likely results of the actions taken (Bandura, 1986). If someone anticipates the consequences of their behaviour to be positive (e.g., getting a promotion, winning a match, lifting a heavier weight), their motivation to engage in the required actions (i.e., working hard and consistently) increases. For example, if a gym-goer believes that dedicating time to studying proper lifting techniques will increase their ability to lift weight, they are more likely to devote time to learning proper lifting mechanics. In conclusion, outcome expectations play a crucial role in driving motivation, as individuals are more likely to pursue actions when they foresee beneficial outcomes.

Behavioural capability is the knowledge and skills required to perform a given behaviour (Bandura, 1986). To perform a behaviour effectively, one must understand the precursor actions necessary to execute the behaviour. The greater the behavioural capability, the more likely a person is to engage in the behaviour. For instance, if a person has knowledge of nutrition and the skills to prepare balanced meals, they are far more likely to maintain a healthy diet. In sum, behavioural capability highlights the importance of educating individuals on the benefits of behaviour change, as focusing on expanding their knowledge and practical abilities ensures they can carry out the actions required to meet their goals.

Applying the SCT to Encourage Behaviour Change



Let's go back to Emily and see how the SCT can be applied to encourage her to engage in physical activity.

<u>Four critical factors</u>	<u>Emily's factors and how to apply the SCT to modify them</u>
Observational Learning	<u>Emily's friends prefer sedentary activities.</u> <u>SCT suggestion to increase the likelihood of engaging in physical activity:</u> Due to the lack of social persuasion, there is no positive reinforcement from friends that motivates her to engage in physical activity. To address this, explore group physical activity options in Emily's community (e.g., fitness classes, sports leagues, running clubs, etc.). Being part of a community or group that engages in routine physical activity will encourage Emily to do the same. Additionally, provide Emily with resources (e.g., fitness-related social media accounts) that share personal journeys in physical activity, which can inspire her to start a journey of her own.
Reciprocal Determinism	<u>Emily is anxious about going to the gym, she gets fatigued after going to the gym, and her friends prefer sedentary activities.</u> <u>SCT suggestion to increase the likelihood of engaging in physical activity:</u> Help Emily address her negative beliefs (e.g., lack of confidence, anxiety, self-doubt) regarding exercise by creating a supportive environment. For example, encourage Emily to find like-minded individuals at work and organize a physical activity that they can do collectively over lunch.

Outcome Expectations	<u>Emily has the desire to engage in physical activity, but she is overwhelmed by the level of commitment and feels too out of shape currently.</u> <u>SCT suggestion to increase the likelihood of engaging in physical activity:</u> Suggest that Emily starts with smaller goals (e.g., going to the gym twice a week) so that when she accomplishes them, she develops positive expectations about the outcomes of being active. Furthermore, educate Emily about the positive outcomes of engaging in consistent physical activity (e.g., improved health, increased energy, and a better mood). Remind her that these outcomes will not be seen immediately, but they can be achieved through commitment and adherence to a balanced lifestyle. Ultimately, educating Emily about the benefits will increase her motivation.
Behavioural Capability	<u>Emily has anxiety about working out and the stress from work makes her too overwhelmed to commit to a workout routine.</u> <u>SCT suggestion to increase the likelihood of lifestyle changes:</u> Build up Emily's self-efficacy by breaking lifestyle changes into manageable chunks (e.g., if the goal is to walk an hour a day, start with 15-minute walks during lunch and gradually increase the duration). By incorporating physical activity into her workday, Emily will have more time to relax in the evening and de-stress. Additionally, minimize negative emotional stress by providing Emily with emotional regulation strategies that may work for her (e.g., meditation, visualization, etc.).

Conclusion

In sum, SCT provides a comprehensive framework for understanding how multiple factors interact to influence one's behaviour. From individual beliefs to environmental conditions, these factors shape how people learn, develop, and perform. By addressing these various levels, practitioners can design more effective interventions to promote the desired behaviour.

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Self-Determination Theory

Ever wonder why some athletes push themselves to the limit purely for the love of the game, while others struggle in the absence of external rewards?

Overview

Self-determination theory (SDT) focuses on human motivation and the factors that promote autonomous behaviour and well-being. Motivation exists on a continuum from amotivation (none), low motivation (extrinsic), and all the way to the most autonomous (intrinsic) form of motivation (Deci & Ryan, 1985). The theory also identifies three fundamental psychological needs – autonomy, competence, and relatedness – which must be satisfied to reach the most autonomous form of motivation. In sum, to promote a specific behaviour, individuals need to be supported in a way that fosters intrinsic motivation and addresses their psychological needs. Once autonomous motivation is experienced, it can lead to long-term engagement and satisfaction (Deci & Ryan, 2000).

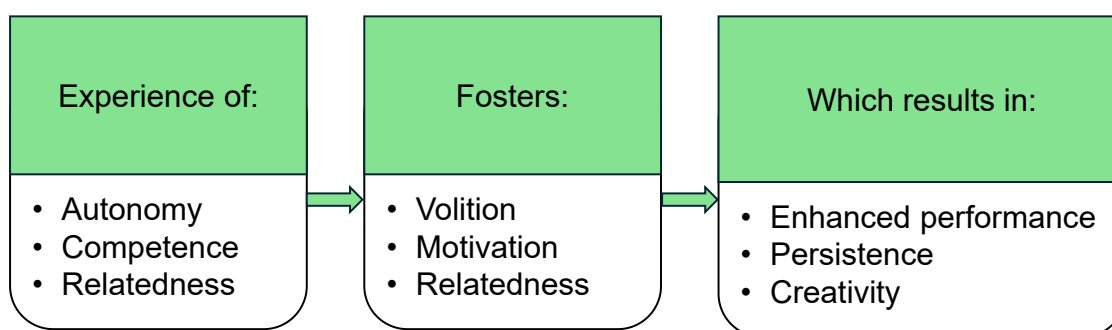
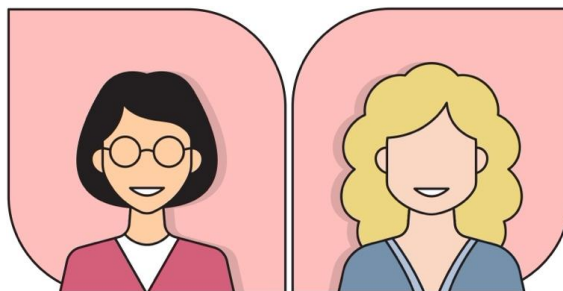


Figure 4. Illustration of the Self-Determination Theory. *Adapted from Ryan and Deci (2017).*

Real-World Example

Meet Lisa and Mia, both corporate employees in their early 40s trying to adopt a healthier lifestyle.



Lisa values her independence and chooses to join a local running club. She enjoys the social aspect of meeting like-minded individuals and appreciates the encouragement she receives from her peers.

At the running club, Lisa feels a sense of accomplishment as she successfully completes her training sessions. She sets personal goals and with each accomplishment, her confidence grows. The supportive environment fosters relatedness, as she builds friendships and feels connected to her running group. Lisa's motivation drives her to continue running regularly as she not only enjoys running but also feels healthier and more energetic, reinforcing her dedication to this behaviour.

Mia's workplace has a corporate wellness program that mandates participation in weekly exercise sessions. She feels compelled to join, but she has not had the opportunity to choose the activities she prefers. Mia attends the sessions but finds the workouts unengaging and overly challenging, which diminishes her sense of competence. Additionally, she feels isolated, as she does not connect with her coworkers during these forced activities.

Because Mia feels forced to attend and her competence is undermined, her motivation wanes. She begins to dread the exercise sessions and eventually stops attending altogether. Without the motivation to engage in physical activity, she struggles to establish a consistent exercise routine, ultimately missing out on the health benefits and personal fulfillment that come with regular exercise.

Key Components/Constructs

The Continuum of Motivation

As previously mentioned, motivation exists on a continuum ranging from amotivation to extrinsic and intrinsic motivation, capturing the different ways people are driven to engage in behaviour. **Amotivation** reflects a lack of intent to act, often due to perceived incompetence, lack of value, or feelings of helplessness (Ryan & Deci, 2000) – it is the most autonomous form of motivation. **Extrinsic motivation** is behaviour driven by external rewards (e.g., recognition, medals, pay raises) or pressures (e.g., avoiding punishment, pleasing others). Finally, **intrinsic motivation** drives actions undertaken purely for personal satisfaction or enjoyment (Ryan & Deci, 2000) – it is the most self-determined form of motivation. **Self-determined** (i.e., autonomous) motivation, which encompasses intrinsic motivation and some forms of extrinsic motivation, reflects the degree to which behavior is aligned with one's values and sense of self (Deci & Ryan, 1985). Individuals who are self-determined in their motivations engage in activities with a sense of choice and personal endorsement rather than obligation. Those who are self-determined are more likely to experience higher levels of adherence and well-being compared to those driven solely by external rewards (Ryan & Deci, 2000). Autonomous motivation can be fostered by creating environments that support the three psychological needs (discussed later in further detail). As such, providing people with meaningful choices, opportunities to improve their skills, and fostering positive connections with those around them can enhance their internal drive to engage in activities for personal satisfaction rather than external rewards (Deci & Ryan, 2000).

Three Examples Along Different Points in the Continuum

<i>Amotivation</i>	An athlete doesn't see the point in training for an upcoming competition and has no desire to put in any effort, feeling indifferent about the outcome.
<i>Extrinsic motivation</i>	An athlete trains overtime to avoid being benched next game, focusing on avoiding punishment for poor performance rather than personal satisfaction from the task.
<i>Intrinsic motivation</i>	A person practices tennis daily because they genuinely enjoy the process of learning and improving their skills, regardless of external rewards.

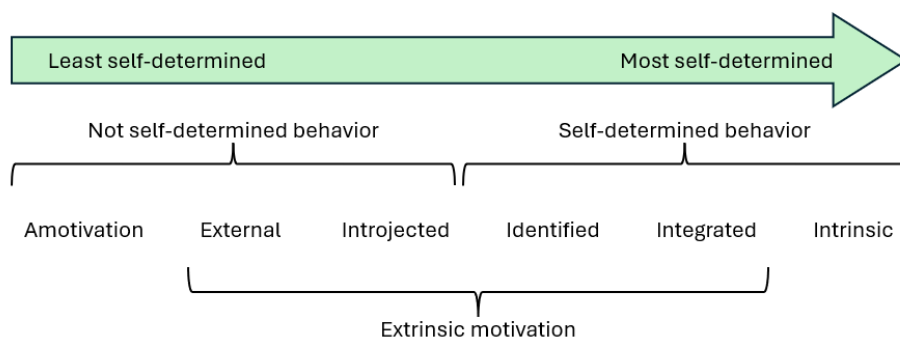


Figure 5. Illustration of the continuum of motivation. *Adapted from Deci and Ryan (2000).*

Three Basic Psychological Needs

The three basic psychological needs at the core of SDT are autonomy, competence, and relatedness. **Autonomy** refers to the need to feel in control of one's actions and decisions (Deci & Ryan, 1985). For instance, when an individual creates their own workout routine and ensures it includes activities that are meaningful and enjoyable to them, they are more likely to adhere to the program compared to if they were forced to partake in the activity. **Competence** is the need to feel effective and capable in achieving one's goals, driving individuals to take on more challenging tasks (Deci & Ryan, 1985). For example, when someone feels capable in their physical activity skills, their confidence and motivation to do physical activity increases. **Relatedness** reflects the need to feel connected and valued by others, such as forming bonds with family, friends, colleagues, or teammates (Deci & Ryan, 1985). For instance, an athlete who is part of a team with shared values and a strong collective culture is more likely to feel connected to their teammates than someone who is part of a highly individualistic team.

Overall, when autonomous motivation is experienced and all three psychological needs are met, an individual is more likely to feel satisfied, thus improving performance and adherence to the behaviour (Deci & Ryan, 1985).

Applying the SDT to Encourage Behaviour Change



Let's go back to Mia and see how the SDT can be applied to encourage her to lead an active lifestyle by increasing autonomous motivation.

<u>Three critical aspects</u>	<u>Mia's perceptions and how to apply the SDT to modify them</u>
<i>Autonomy</i>	<u>Mia feels forced to go to the training sessions.</u> <u>SDT suggestions to increase autonomy:</u> Advise Mia to give the corporate program organizers suggestions and feedback regarding alternative activities (e.g., low-impact exercises like walking or yoga), as some people may find them more enjoyable and feasible. If that is not possible, encourage Mia to look into modified versions of the exercises being performed in the program. Once she masters those, she can work her way up to the expected exercises. This will emphasize her sense of control and thus increase her autonomous motivation.
<i>Competence</i>	<u>Mia finds the training being performed too challenging which diminished her sense of competence.</u> <u>SDT suggestions to increase competence:</u> Since Mia doesn't currently engage in much physical activity, suggest small, manageable steps, such as incorporating short walks or simple strength exercises into her routine. Gradual progress will build her sense of competence and confidence which will translate into the corporate program.

Relatedness

Mia feels disconnected and isolated from her colleagues during these forced activities.

SDT suggestions to increase relatedness:

Suggest that Mia participate in activities with friends or family members who are also interested in health and fitness. For example, she could go on walks or join an exercise group with friend/family which combines activity with a social experience. Or with the corporate wellness program, she could suggest that after the group workout they perform a social activity for team bonding purposes.

Conclusion

In summary, SDT explains motivation by highlighting the importance of satisfying the needs for autonomy, competence, and relatedness. Understanding the continuum of motivation allows educators and coaches to create environments that promote sustainable, self-driven behaviour. In physical activity and exercise psychology, SDT offers a valuable framework for improving athletic performance and fostering long-term commitment.

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Transtheoretical Model

Change doesn't happen overnight; it's a journey through distinct stages — each step bringing you closer to maintaining a lifestyle change.

Overview

The Transtheoretical Model (TTM) is a framework used to understand behaviour modification by explaining how individuals move through different stages of change (Prochaska & DiClemente, 1983). Identifying which stage (ranging from precontemplation to maintenance) an individual is in can help create an effective intervention that supports their progression through the stages of change. Overall, the model acknowledges that change is a dynamic process influenced by both internal and external factors.

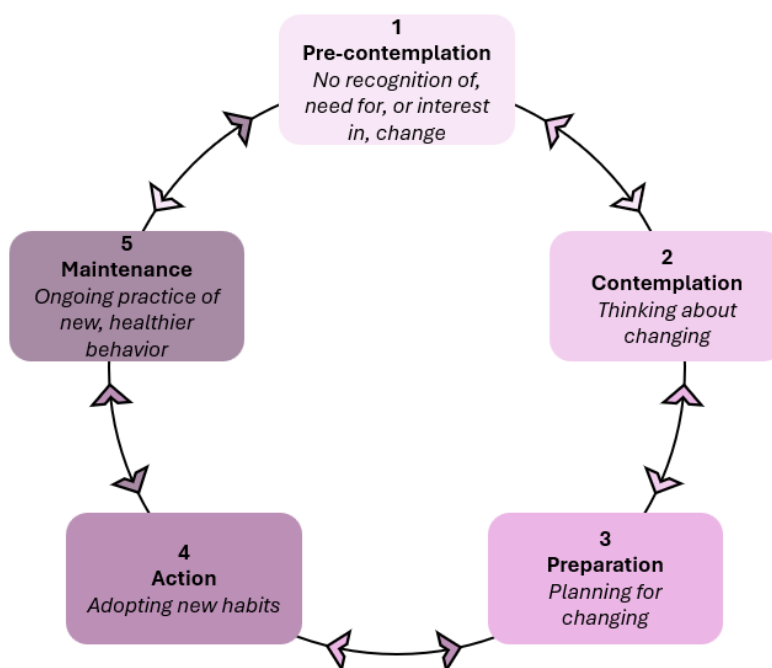


Figure 6. Illustration of the Transtheoretical Model. Adapted from Prochaska and DiClemente (1984).

Real-World Example

Meet Sarah and Omar, both in their early 40s looking to engage in physical activity.



Sarah is a marketing professional who has always struggled with maintaining a consistent exercise routine. After gaining some weight and feeling low on energy, she decided she wanted to improve her fitness. Initially, Sarah was unaware of the need for change and often dismissed her sedentary lifestyle as normal for her busy schedule. But after attending a health seminar at work, Sarah began to contemplate the benefits of regular exercise. She started to recognize how her current lifestyle was affecting her health and well-being.

Sarah made a commitment to change, she researched different types of workouts, joined a local gym, and set realistic goals. She planned to start with three 30-minute sessions per week. Sarah began attending group fitness classes at the gym. She tracked her workouts and felt proud of her progress. With the support of friends and a positive mindset, she consistently showed up for her classes.

After six months of regular exercise, Sarah had not only improved her physical fitness but also felt more energized and confident. She established a routine, integrating physical activity into her life, and continued to set new fitness goals to keep her motivated.

Omar is an accountant who leads a very sedentary lifestyle. He has been aware of the importance of exercise for his health but struggles to commit to a regular routine. He is initially indifferent to the idea of exercising. He acknowledges that he should be more active but often rationalizes his inactivity due to work commitments and lack of time. After a routine health check-up, Omar learns he has high cholesterol levels. This news makes him contemplate the need for change, but he remains hesitant about starting an exercise routine, feeling overwhelmed by the effort required.

Omar talks to friends who exercise and considers joining a gym. However, he struggles to make concrete plans. He sets a vague goal of wanting to start exercising “soon” but doesn’t take actionable steps.

When Omar finally decides to join a gym, he attends only a couple of sessions. He feels intimidated by the environment and lacks the confidence to ask for help or guidance. After a week, he skips his workouts due to feelings of self-doubt and frustration.

Omar finds himself back in a cycle of inactivity. He oscillates between contemplating starting again and giving in to his busy work life. He doesn’t reach the maintenance stage, as he has not yet committed to regular exercise.

Key Components/Constructs

Stages of Change

As previously mentioned, the stages of change range from precontemplation to maintenance (Prochaska & DiClemente, 1983). In **precontemplation**, the individual is not yet considering change and may not even be aware of the benefits of it. For example, someone might believe that they do not need to change their eating habits because they feel healthy. In **contemplation**, the individual is aware of the need for change and is thinking about starting to make the change, but they have not committed yet. For instance, they might know they should start exercising but are not sure if they are ready to make time for it. Once in **preparation**, the individual has decided to act soon and may be making small steps toward change. For example, if the plan is to join a volleyball league, they would be researching different leagues in the area to see which one is most appropriate for them. In the **action** stage, the person is actively engaging in the new behaviour, such as starting to attend volleyball practice, but they have only been doing it for a short time, typically less than six months. Once the person has been engaging in the behaviour for several months and is working to prevent relapse, they enter the **maintenance** stage. At this point, the behaviour (e.g., volleyball practice) becomes a part of their routine. Lastly, the **termination** stage is achieved when the behaviour has become so ingrained that there is no longer any temptation to return to old habits. In this stage, the person would no longer even consider quitting the volleyball league, as playing has become an automatic part of their lifestyle/identity.

Example Statements from Each Stage of Change

<i>Precontemplation</i>	I feel fine without doing physical activity and don't see a point of changing my lifestyle.
<i>Contemplation</i>	I know I should exercise more, but I'm still not sure when or how I'd fit it into my schedule.
<i>Preparation</i>	I've signed up for a gym membership, and I'm planning to start next week.

<i>Action</i>	I've been working out three times a week for the past month, and I'm feeling more energetic.
<i>Maintenance</i>	I've kept up my exercise routine for six months, and now it's just a part of my daily life.
<i>Termination</i>	Exercising is something I just do now, and I can't imagine stopping.

Three Factors Influencing Stage Progression

1. Self-efficacy is an intrapersonal factor that refers to an individual's belief in their ability to carry out specific behaviours (Bandura, 1997) and progress through the stages of change. As self-efficacy increases, so does one's confidence in engaging in new behaviours and overcoming barriers, particularly in the action and maintenance stages, where individuals are more prone to relapse (Bandura, 1997). Additionally, as individuals progress from stage to stage, self-efficacy grows, reinforcing their ability to sustain the new behaviour and reduce relapse (Bandura, 1997).

2. Decisional balance is the process of weighing the pros and cons of changing behaviour at each stage to determine if it is 'worth it' (Prochaska & DiClemente, 1983). In the early stages (i.e., precontemplation and contemplation), the disadvantages of change (e.g., discomfort, time commitment, financial cost) tend to outweigh the advantages. However, in the later stages (i.e., action and maintenance), when the behaviour becomes a part of the routine, the benefits become more apparent which increases the likelihood of change and adherence.

3. Processes of change are cognitive, affective and behavioural strategies that help individuals move through the stages (Prochaska & DiClemente, 1983; Prochaska & DiClemente, 1984). Examples include:

<i>Consciousness Raising</i>	Increasing awareness of the problem.
<i>Dramatic Relief</i>	Emotional arousal about the problem and relief from changing.

<i>Self-Reevaluation</i>	Assessing how personal identity relates to the change.
<i>Social Liberation</i>	Awareness of social norms supporting the behaviour change.
<i>Helping Relationships</i>	Seeking support from others.
<i>Reinforcement Management</i>	Increasing rewards for positive behaviour.
<i>Stimulus Control</i>	Managing triggers for the undesired behaviour.

Applying the TTM to Encourage Behaviour Change



Let's go back to Omar and see how the TTM can be applied to encourage him to engage in more physical activity to reduce the impacts of high cholesterol.

<u>Stages of change</u>	<u>Omar's perceptions and how to apply the TTM to modify them</u>
<i>Pre-contemplation</i>	<u>Omar rationalizes his inactivity by saying he is still healthy.</u> <u>TTM suggestions to progress to the next stage:</u> Encourage Omar to seek more information about the benefits of exercise and risks of inactivity (e.g., high cholesterol), paying attention to talk about more than just the <i>physical health</i> benefits; perhaps discussing psychological and social benefits. Can provide testimonials of people who were positively impacted by leading an active lifestyle.

Contemplation	<u>Omar learns of his high cholesterol levels, but he remains hesitant about starting an exercise regime.</u> <u>TTM suggestions to progress to the next stage:</u> Encourage him to weigh out the pros and cons of taking actions. To help, he can discuss the impacts of the condition on quality of life and the best course of action with his doctor. Brainstorming solutions to the barriers (e.g., lack of time) would also be beneficial. For instance, if Omar bikes to work instead of driving, he saves himself time in the evening that he would have otherwise spent exercising in the gym.
Preparation	<u>Omar sets a vague goal of starting exercise “soon” but takes no actionable steps.</u> <u>TTM suggestions to progress to the next stage:</u> Encourage him to research different physical activities that may be beneficial for someone with his condition and how to manage adverse symptoms. If there is any community led clubs/leagues that pique his interest, advise him to try them out. Overall, setting an action plan that is clear and achievable will help him know what is expected of him in order to progress.
Action	<u>Omar joins the gym and attends a couple of sessions but stops after a week due to self-doubt and frustration.</u> <u>TTM suggestions to progress to the next stage:</u> Advise Omar to think of the positive (mental/physical) impacts engaging in physical activity has had on his condition and lifestyle. Making any necessary modifications to his physical activity routine can be done to better suit his interests and doctor’s recommendations. Additionally, celebrating small achievements (e.g., getting takeout after consistently going to the gym for a month) can act as positive reinforcement.

Maintenance

Omar does not reach this stage as he relapses in the cycle of inactivity.

TTM suggestions to progress to the next stage:

Omar would need to identify triggers for relapse and create strategies on how to mitigate them ahead of time. Regularly reviewing the benefits he experiences from managing his health and reflecting on his progress can help maintain his motivation. Lastly, encourage Omar to seek support from his friends and family to enforce accountability.

Conclusion

In sum, the TTM provides a comprehensive framework to understand the process of behaviour change through its distinct stages. By acknowledging that change is a gradual process influenced by varying levels of readiness and decisional balance, the TTM offers valuable insights into how individuals can successfully navigate and sustain behaviour modification (Prochaska & DiClemente, 1983). By incorporating concepts like self-efficacy and decisional balance, the model emphasizes the importance of interventions tailored to an individual's current stage of change (Prochaska & DiClemente, 1984).

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Theory of Planned Behaviour

What drives an athlete to commit to a rigorous training regimen? The answer lies in the delicate balance between belief, intention, and control.

Overview

The Theory of Planned Behaviour (TPB) is used to predict and understand human behaviour by examining the relationships between **attitudes**, **subjective norms**, and **perceived behavioural control** (Senkowski et al., 2019). According to TPB, behavioural **intentions** are the primary determinant of behaviour and are formed through an individual's attitudes toward the behaviour, the influence of social norms, and their perceived ability to perform the behaviour (Ajzen, 1991). This theory provides a structured approach to understanding and predicting how these factors collectively affect decision-making and behaviour (Ajzen, 1991).

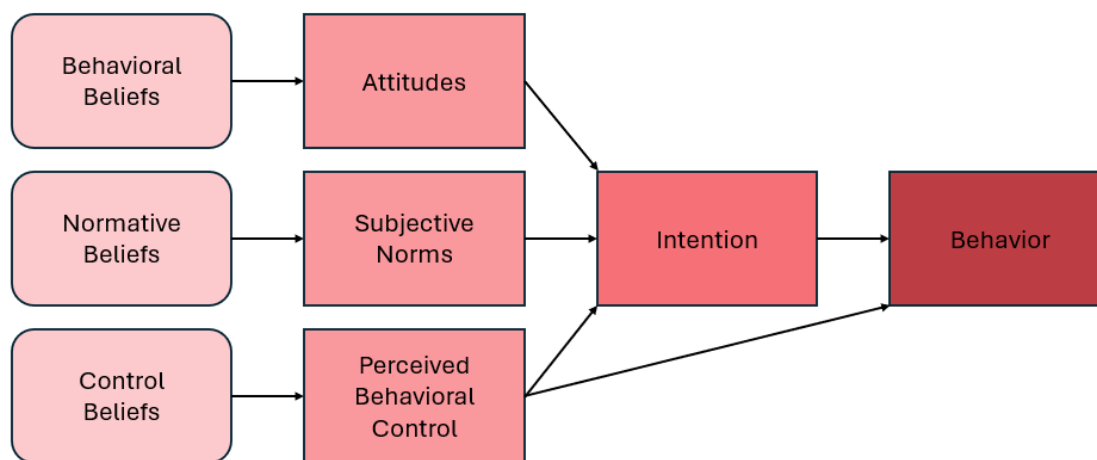


Figure 8. Illustration of the Theory of Planned Behaviour. *Adapted from Ajzen, (1991).*

Real-World Example

Meet Alex and Jorge, both first year university students looking to engage in a healthier lifestyle.



Alex goes to the gym consistently 3 times a week. She believes that regular exercise is crucial for maintaining both her physical health and mental well-being. She enjoys the feeling of accomplishment after working out and believes that exercise will help her reach her fitness goals, such as increasing her energy levels and improving her mood.

Her friends and family are highly supportive of her exercising routine. Many of her close friends also regularly go to the gym, and they often invite her to join them. She feels that staying active is a social norm within her group, and she doesn't want to fall behind.

Alex feels confident in her ability to maintain a consistent workout routine. She has a flexible work schedule, access to a gym nearby, and has developed time-management skills that allow her to fit exercise into her day. Even on busy days, she knows how to rearrange her schedule to make time for the gym.

Alex regularly goes to the gym, as she has a positive attitude towards exercise, strong social support, and high perceived control over her ability to work out. These factors align to make the behaviour achievable and sustainable for her.

Jorge wants to eat less processed foods by eating five servings of fruits and vegetables per day. He knows that eating healthy is important but finds it difficult to get excited about vegetables and fruit. He sees healthy eating as a chore, believing that preparing nutritious meals takes too much time and effort. Additionally, he doesn't think it will make a significant difference in how he feels day-to-day, even though he knows it's good in the long run.

Jorge's family and friends don't prioritize healthy eating. Most of his meals are shared with people who prefer fast food or highly processed options. He feels that healthy eating isn't something people in his social circle take seriously, and there's no external pressure to make better food choices.

Jorge struggles with the practical aspects of eating healthy. He lives in an area where fresh produce is expensive, and he lacks the cooking skills to make nutritious meals taste appealing. He often feels that healthy eating is too difficult to manage given his current circumstances, and the barriers seem overwhelming.

Jorge doesn't engage in healthy eating regularly. His negative attitude toward the behaviour, lack of support from his social environment, and low perceived control over the factors that enable him to eat well lead him to avoid the behaviour altogether.

Key Components/Constructs

Four Core Components

Attitudes toward behaviour are individual's positive or negative evaluations of performing a certain behaviour. Based on the TPB, one's attitude is determined by their beliefs in the outcome of behaviour and their evaluations of these outcomes (Ajzen, 1991). For example, if someone believes consistent warmups will lead to a decreased chance of injury, they will ensure to partake in warmups. The opposite is true if they believe that warmup does not have an impact on risk of injury. As such, attitudes predict intention which ultimately predicts the actualization of behaviour.

Subjective norms involve the perceived social pressure to perform or not to perform a certain behaviour (Ajzen, 1991). This component reflects one's beliefs on whether those around them approve or disapprove the behaviour. If one believes that those around them expect them to engage in behaviour they will try to comply with the expectations, and thus be more likely to engage in the act. The opposite is true if they believe others are indifferent to them engaging in the behaviour. For instance, if your teammates expect you to show up to three practices a week with the team, you are more likely to show up.

Perceived behavioural control is the individual's perception of their ability to perform the behaviour given the resources and obstacles they experience (Ajzen, 1991). High perceived behavioural control indicates that an individual feels capable of performing the behaviour despite potential obstacles. This perception affects both their intentions and actual behaviour, particularly when they have some control over the situation. For example, if someone wants to start exercising regularly but does not think they have enough time or sufficient ability to do so, their perceived behavioural control is low, and thus their intention to act diminishes along with their likelihood of engaging in the behaviour.

Behavioural intentions are shaped by the three elements discussed above, determining the individual's plan to perform a specific behaviour. The stronger the intention to act, the more likely it is that the behaviour will be performed. According to TPB, intentions are the immediate precursors to behaviour, reflecting the individual's motivation and readiness to act (Ajzen, 1991).

Applying the TPB to Encourage Behaviour Change



Let's go back to Jorge and see how the TPB can be applied to encourage him to implement a healthier diet.

<u>Four critical aspects</u>	<u>Jorge's perceptions and how to apply the TPB to modify them</u>
<i>Attitudes toward behaviour</i>	<u>Jorge views healthy eating as a chore and does not think it will lead to significant change in his day-to-day life.</u> <u>TPB suggestions to improve attitudes towards behaviour:</u> Provide Jorge with information about the negative long-term risks of eating processed and fast food. This information can be given in the form of testimonials from people similar in age to Jorge who have started and maintained a healthy diet (and have experienced the benefits of it) to make it more applicable to him.
<i>Subjective norms</i>	<u>Jorge's family and friends do not prioritize healthy eating.</u> <u>TPB suggestions to improve subjective norms:</u> Jorge can leverage social influences and support networks (e.g., healthy diet Facebook groups or social media accounts). By joining a community of people who value healthy eating, his motivation towards making the change will increase. Once he feels ready to cook healthier meals, he can make it into an activity with his family to encourage them to eat healthier as well.

<i>Perceived behavioural control</i>	<u>Jorge lacks cooking skills and the finances to afford fresh produce.</u> <u>TPB suggestions to improve perceived behavioural control:</u> Again, Jorge can look online for free guidance on how to cook meals that pique his interest. Once Jorge feels competent in his cooking skills, he will feel more confident about maintaining a healthy diet. Advise Jorge to look into budget friendly alternatives to fresh produce (e.g., look what is on sale each week or buy frozen produce).
<i>Behavioural intentions</i>	<u>Jorge currently has minimal intention to change his lifestyle.</u> <u>TPB suggestions to improve behavioural intentions:</u> Set specific and meaningful goals using the “SMART” for short- and long-term goals that are meaningful to Jorge. These goals can then guide the action plan. For example, instead of right away saying that he will eat five servings of fruits and vegetables every day of the week, he can start with twice a week. After a month of doing this, he can go up to 4 days a week. Making the expectations more reasonable can help solidify his intention to change.

Conclusion

Overall, the TPB showcases how intentions determine one's likelihood of engaging in the behaviour. Understanding that intentions are influenced by attitudes, subjective norms, and perceived behavioural control will help guide practitioners in creating an intervention that is more likely to be successful.

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Part Three: Case Study Examples

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New Physical Activity (PA) Coaching Client Intake Form (all information is self-reported)

Name:	Jordan Patel
Age:	43 years
Self-reported gender:	Man
Cultural background:	Indian
Past PA involvement /experiences:	Played recreational cricket during university. Occasionally joined fitness classes. For the last 10 years, he has been mostly inactive due to the demands of his career.
Self-reported barriers to PA: Jack	Jordan works long hours, leaving little time for PA on weekdays. He characterises himself as an introvert and feels self-conscious exercising in public/group fitness classes because he is never sure he is exercising correctly and believes he is out of shape. His parenting is based on cultural values and traditions that prioritize family obligations, making it hard for him to prioritize PA after having children.
Motivating factors for PA:	Jordan recently learned he is pre-diabetic and has elevated blood pressure, which makes him anxious about his health. He understands that if left unmanaged, these conditions could progress to serious illnesses; he feels at risk of developing cardiovascular disease since he has a family history of a heart condition. He acknowledges that his sedentary lifestyle, poor eating habits, and extra weight have put him at an even higher risk. He believes that if he does not change his behaviours, his pre-diabetes will evolve into full-blown diabetes.

Social influences:	Jordan's partner encourages him to engage in PA. Jordan wishes be a good role model for his children, who already enjoy sports, and he wants to participate more actively in their activities; however, this co-participation would also take up a lot of this time. Some of his friends play soccer recreationally in an adult league, but Jordan has not joined them yet due to his low fitness and fear of negative evaluation.
Current PA involvement:	Jordan's current PA level is low, limited to occasional family hikes and short walks during the weekend. Most of his day is spent sitting at a desk, with little movement beyond basic daily activities.
PA goal(s):	Lower his blood pressure and manage his pre-diabetes to reduce his risk of long-term health complications. Find a PA routine that aligns with his work schedule and values (e.g., family obligations). Build confidence to participate in group fitness activities and social sports.

Selected theory or model of behaviour change: Health Belief Model [HBM].

Content integrated from selected course lectures (at least 3): Personality in sport and exercise; Anxiety in sport and exercise; Social influences on exercise.

Evidence-Based Plan to Increase Client's Physical Activity Motivation and Behaviour

According to the Health Belief Model (HBM), a person's perception of the likelihood of getting sick and the efficacy of preventive measures determine whether or not they engage in a health-related behaviour (Rosenstock, 1974). According to Rosenstock (1974), a health condition is perceived as a threat to a person's life based on their perceived susceptibility, i.e., whether or not they believe they are personally vulnerable to it, and their perceived severity, i.e., how serious a person thinks the repercussions of a health problem will be. Jordan perceives the risk of developing cardiovascular disease as real and urgent because he has a family history of heart disease and finding out he is pre-diabetic acted as a cue to action to pursue PA coaching. Jordan is driven to act because he is aware that untreated high blood pressure and pre-diabetes can result in serious health issues. Within the HBM, along with this perceived threat, Jordan's likelihood of engaging in PA is also impacted by his evaluation of the perceived benefits (Rosenstock, 1974), i.e., whether PA will aid in managing or preventing cardiovascular disease. Jordan is more motivated because he believes that regular PA will help him control his pre-diabetes and lower his blood pressure. However, his likelihood of engaging in PA is also impacted by his perception of barriers (Rosenstock, 1974), i.e., the time, effort, or discomfort involved in adopting a behaviour. Jordan struggles to begin and maintain PA because of several issues, including his self-consciousness, low confidence and time constraints. Finally, modifying factors in the HBM involve individual characteristics, like cultural background, sociodemographic characteristics, and personality traits, which affect the individual's perception of health risks and his or her willingness to perform the needed prevention behaviour (Rosenstock, 1974). In Jordan's case, his cultural values emphasize a great deal of family obligations, thus, it becomes hard for him to give priority to personal activities such as PA. However, Jordan's family-oriented nature also

serves as a positive influence, given that he wants to be active with his children and serve as a role model. Jordan's family-oriented nature can be leveraged by involving his children in PA to obtain companionship social support as well as emotional social support in the form of encouragement and praise; this also aligns with his motivation to serve as a role model to them. This is supported by research which has demonstrated that co-PA between a father and their children can increase moderate-to-vigorous PA of the father which is essential for obtaining PA health benefits (Latomme et al, 2023). Sociodemographic factors include his sex/gender, demanding career in finance, and middle-aged status, which contribute to sedentary lifestyle and health risks (Diaz et al., 2016). His introversion paired with feelings of self-consciousness/anxiety about being out of shape are barriers to participating in group activities and he also exhibits poor self-efficacy in his ability to perform PA.

In accordance with the HBM, Jordan's perceived severity and susceptibility to cardiovascular disease, as well as his perceived benefits of PA to reduce this risk are all positive influences on his engagement in PA. Consequently, efforts will be made to reinforce these ideas, however, the emphasis of our plan with Jordan will be on overcoming his barriers to PA. Specifically, the aim will be to develop reasonable daily AND weekly PA goals starting with low-impact activities to build Jordan's self-efficacy and consistency; the inclusion of daily goals is important as research has shown that weekly goals alone may not significantly impact PA behaviour (McEwan et al., 2016). Further, focus will be placed on shifting Jordan to using intrinsic (i.e., for personal satisfaction or enjoyment) PA motivators – such as emphasizing quality time with family and improving energy levels – as incentives (Ingram et al., 2021). Since Jordan feels self-conscious about his level of fitness it is difficult for him to participate in PA, particularly in public or group settings. Thus, Jordan needs to be gradually exposed to non-

threatening situations, and so, we will encourage him to start with PA that he feels comfortable doing at home or outside and encourage him to explore PA in social but relaxed settings, such as playing cricket, ultimate frisbee, or other outdoor games with loved ones. He can incorporate his family into his PA plans in order to balance spending time with them while still engaging in PA. Additionally, once Jordan is more at ease with his level of fitness, the influence of his friends who play soccer recreationally presents a chance to participate in sports socially.

Finally, time management strategies will be key to incorporating PA into Jordan's busy schedule. This can be done by reinforcing that PA can be done in spurts rather than long sessions he has to find time for. We will introduce Jordan to the idea of exercise snacking, i.e., “brief intermittent bouts of PA spread across the day”, and how these bouts of PA would be better than not engaging in PA at all (Jones et al., 2024). Jordan can also incorporate prompts or cues to engage in PA in places around his home and work (e.g., setting alarms, taking his running shoes to work; McKay et al., 2019) as a reminder to conduct these short sessions. This behaviour over time will be reinforced if Jordan perceives a reduction in his blood pressure, is able to self-manage his pre-diabetes, and feels more energy, and in turn, this could motivate him to maintain an active lifestyle.

Recommendations to the Client

1. Develop reasonable daily AND weekly goals that you can track. As you achieve them, you will likely start to feel more confident in your ability to maintain physical activity in your life.
2. Engage your partner and children in your physical activity to make it enjoyable and part of your family routine. Ask them to also provide you with emotional support, such as encouragement, as you begin to incorporate more physical activity into your schedule.

3. Begin with activities at home or outdoors (places you feel comfortable) to reduce feelings of self-consciousness.
4. Incorporate “exercise snacks”, i.e., brief (less than 10 minutes) physical activity bursts, during work breaks or evenings to fit physical activity into your busy schedule.
5. Remind yourself that regular activity helps manage blood pressure and reduces pre-diabetes risk. With your increased risk of cardiovascular disease due to your family history, physical activity will be an important part of your disease prevention.
6. Incorporate physical activity prompts or cues around your home and work that can motivate you to conduct short physical activity bursts. Examples include setting alarms on your phone or taking your running shoes to work. Find what works for you!

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New Physical Activity (PA) Coaching Client Intake Form (all information is self-reported)

Name:	Mia Myers
Age:	37
Self-reported gender:	Female
Cultural background:	German
Past PA involvement /experiences:	Played soccer when she was younger but quit during university due to time constraints. Has not engaged in regular PA since then.
Self-reported barriers to PA:	Is pregnant and experiencing constant fatigue. No one else in her life is super active and she does not want to exercise alone.
Motivating factors for PA:	Her obstetrician warned her that she is at high risk of gestational diabetes mellitus (GDM) due to her age and family history (her father has type 2 diabetes, and her sister had GDM when she was pregnant a year ago). Did not think she was at risk because she is a healthy weight and so she is confused and has been extremely stressed about it since. Pamphlet from her doctor suggested PA can help reduce her risk.
Social influences:	Her friends, family, and partner are very supportive. Her sister warns her of the stress having GDM caused her during her own pregnancy.
Current PA involvement:	Mainly sedentary (works from home). Used to go for walks in the summer but now stays indoors.
PA goal(s):	Wants to engage in more PA but does not know where to start.

Selected theory or model of behaviour change: Health Belief Model [HBM].

Content integrated from selected course lectures (at least 3): Stress, emotion, and coping in sport and exercise; Group cohesion in sport and exercise; Social influences on exercise.

Evidence-Based Plan to Increase Client's Physical Activity Motivation and Behaviour

The Health Belief Model (HBM) is centred around the idea that an individuals' health-seeking behaviour is influenced by their perception of a threat of a health problem and the efficacy they assign to the actions aimed at lowering the threat (Rosenstock, 1974). It states that a person's health-related behaviour is dependent on their perceptions of the severity of a potential illness, their susceptibility to it, the benefits of preventative action, and barriers to taking that action (Rosenstock, 1974).

Within this framework, Mia's perception of the severity of GDM is likely high as her sister has warned her of the stress caused by her own GDM, and her father is living with Type 2 diabetes. In addition, her perception of her susceptibility to developing GDM is high as her doctor's concern has caused Mia a great deal of stress. She expressed confusion about her risk as she is a healthy weight; while it is correct that obesity is a major risk factor for the development of GDM, research has shown that maternal age and a family history of diabetes are also important risk factors (Hahn et al., 2023; Huy et al., 2012). Thus, we will share resources with Mia on both the risk factors to develop GDM and the risks for her and her baby. Before doing so, however, it will be important to discuss and manage Mia's stress.

For Mia, we will work to differentiate her stress response from the stressors in her life, including her concern about developing GDM. She should internalize that while she may not be able to control the stressors, she can learn to manage her appraisal of them in order to minimize their impact on her emotions. Aligning with the Transactional Model of Stress (Lazarus & Folkman, 1984), we will walk Mia through a two-step verbal appraisal of specifically her concerns about developing GDM where first, we will confirm that she perceives it as a threat to her and her baby's health, and then second ask her what she feels can be done to reduce her risk

or cope with her stress. In the HBM framework, getting Mia to engage in more physical activity (PA) would first require her to believe that it could contribute to reducing her risk of developing GBM. Mia shared that she read a pamphlet that led her to seek PA coaching so this is a good first step, however, we will also share resources on *how* PA reduces GDM risk (i.e., improved insulin sensitivity, increased fat-free mass; Tobias et al., 2011). In addition, we will share resources on the use of PA as a stress management/coping strategy because if Mia believes she can cope with her stress, then she can use it as positive stress to motivate her to engage in PA.

Addressing the final component of the HBM, i.e., Mia's perceived barriers to engaging in PA, will be the main focus of our work together. Barriers to PA she lists include pregnancy-related fatigue, a lack of companionship support for PA, and feeling like she does not know where to start. Consequently, we will encourage Mia to attend PA classes in her community that are tailored to pregnant individuals. These classes should be led by an instructor who is encouraging, provides reinforcement, and who is knowledgeable and fosters a cohesive group environment, as this will contribute to her enjoyment and likelihood of attending future classes (Gray & Rhodes, 2018). Mia's adherence to these classes will also be improved if she perceives a greater level of cohesion with the other individuals in the group (Gray & Rhodes, 2018; Maher et al., 2015). Thus, she should seek out classes that have a smaller group size (Tulin et al., 2018), and that have members who she perceives as similar to her, who are enthusiastic and consistently attend (Brown & Pehrson, 2019). Finally, while engaging in PA may improve her pregnancy-related fatigue (Liu et al., 2020), it is also critical that Mia does not see PA as an all-or-nothing phenomenon. On days where she is more tired, Mia will be encouraged to engage in more light-intensity PA, e.g., stretching or walking, that will still contribute to improving her overall health and risk of developing GDM.

Recommendations to the Client

1. Differentiate between your stressors and your stress (your response that you have control of). To turn your stress about developing gestational diabetes into positive stress that motivates you to do more physical activity, consider the fact that you are in control of your behaviours to minimize your risk. Physical activity can not only reduce your risk, but it can also act as a great stress management tool.
2. Even people of healthy weight can get gestational diabetes. Take time to read the resources we have provided on the how your age and family history contribute to a higher risk, and on the risks gestational diabetes pose to you and your baby. These are not meant to scare you but instead to make you aware of why starting to engage in physical activity is important.
3. Look for fitness classes in your community that are tailored to pregnant individuals. To make sure you enjoy these classes, and will want to return, look for classes that are led by an instructor you feel is encouraging and knowledgeable, and who provides positive feedback.
4. In picking which fitness classes to attend, look for ones that are a smaller group, and whose members you believe are similar to you, and who are enthusiastic and attend class regularly. Coming together for a common goal of getting more physical activity may help you feel more connected to others in the group and act as a good social opportunity.
5. Pregnancy-related fatigue is normal but should not stop you from engaging in physical activity. On days where you are too tired for more intense activities, try things like stretching or going for a walk; the little things still add up to great benefits and a reduced risk of developing gestational diabetes.

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New Physical Activity (PA) Coaching Client Intake Form (*all* information is self-reported)

Name:	André Diop
Age:	40 years
Self-reported gender:	Man
Cultural background:	Senegalese
Past PA involvement /experiences:	Was never very active in his life. Recently was invited by a co-worker to perform a high intensity interval training session at a Cross-fit gym which left him exhausted mentally and physically for days.
Self-reported barriers to PA:	Does not enjoy exercising in the gym and the exhaustion that follows intense “gym work”. Does not feel exercise is fun. “Dreads exercise”.
Motivating factors for PA:	Worried he is “too skinny” and feels he lacks muscle mass for certain tasks. He is often teased about his weight by co-workers. Remediating his concerns about being too skinny and feeling of anxiety around muscular men is a driving force for taking up PA. Wants to play more basketball with his son but does not because he feels his size, lower skill level, and poor fitness would make it uncomfortable.
Social influences:	Co-workers who perform intense gym sessions (Cross-fit). Is married. Attends a community church regularly. Loves to watch NBA games with his son who is expecting to play basketball in college.
Current PA involvement:	Spends most of his free time gardening. Enjoys walking his two dogs and going for walks in the evening with his partner. Has a basketball hoop in his driveway he uses occasionally with his son.

PA goal(s):	Increase muscle mass while engaging in PA regularly. Improve cardiovascular fitness to be able to play more basketball with his son.
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Selected theory or model of behaviour change: Social Cognitive Theory [SCT].

Content integrated from selected course lectures (at least 3): Group cohesion in sport and exercise; Social influences on exercise; Body image in sport and exercise.

Evidence-Based Plan to Increase Client's Physical Activity Motivation and Behaviour

Social Cognitive Theory (SCT) posits that human behaviour is influenced by observing behaviour outcomes and linking them to values or social expectation (Bandura, 1986). SCT describes goals or intentions as drivers of behavior, emphasizing self-efficacy (i.e., one's belief in their ability to complete tasks) and the interaction between personal, behavioral and environmental factors as central to shaping those goals and intentions (Bandura, 1986). The interdependent interactions between these factors and behaviour is known as reciprocal determinism and is a key construct of SCT (Bandura, 1986).

Self-efficacy, which is an individual's belief in their ability to complete tasks such as PA, can be influenced by mastery experiences, vicarious experiences, social persuasion, and physical and emotional cues the individual has associated with specific behaviours (Bandura, 1997). To foster André's motivation toward PA, it will be necessary to increase his self-efficacy for PA through mastery and vicarious experiences and to present PA as something that elicits positive emotional and physical experiences (e.g., enjoyment, good feelings) by creating achievable goals so he can experience success as well as positive emotions and physical responses. Vicarious experiences are more impactful if the observer perceives the person observed as similar to them (Bandura, 1997); thus, André can look online (e.g., YouTube) to find videos of someone similar to himself achieving the PA lifestyle he is striving for. This is likely to also improve his perception of outcome expectations, which in SCT refers to the expected outcomes of a behaviour (Bandura, 1986); in this case, achieving goals he sets will help create an expectation of similar success in the future in addition to improving his behavioural capability for PA. Further, seeing positive impacts of PA over time on his cardiorespiratory health and appearance (e.g., enhanced muscle mass) can reinforce these expectations.

Since André ‘dreads exercise’ and wishes to avoid post-PA exhaustion, it will be important to improve his emotional and physical cues associated with PA. By reframing PA as any bodily movement – as opposed to only strenuous exercise – André may begin to associate other forms of energy expenditure (gardening, walking, etc.) as positive actions with regards to quality of life (Fortier et al., 2012). Since André already participates in gardening and walking, it will be important to emphasize that these activities are PA and things that can be done close to home. Having him set goals associated with these activities would increase his motivation towards regular PA by increasing feelings of self-efficacy (Schunk & DiBenedetto, 2020). This reframing can also improve André’s outcome expectations by showing him that he has had success participating in PA already and provide a mastery experience for him to build motivation from. Moreover, reducing perceived effort or exertion may positively affect their exercise behaviour (Zenko & Jones, 2021); for example, André can be encouraged to incorporate music into his PA which has been shown to reduce perceptions of exertion (Fritz et al., 2013).

As André feels body-related shame about being “too skinny” and exhibits upward social comparison around more muscular men it will be important to address this form of social physique anxiety while motivating him towards physical fitness, as body-related anxiety and concerns can create a feedback loop which can lead to depressive symptoms and mental health issues (McCreary & Saucier, 2009). As an avid basketball fan, André could be encouraged to observe players who have similar physiques to him experience success; this observational learning may allow him to pick up strategies used by players that he can apply in his own PA.

Improving the social environment in which PA takes place can also help André improve his motivation towards activity. Taking part in PA in a group of similar peers or outside of a gym setting could help by putting the focus on enjoyment of PA with others, without factors that could

heighten body-related anxiety and concerns (e.g., mirrors). As well, instead of structured gym or CrossFit sessions, André could join recreational events/leagues, participate with his church community groups, or extend his current PA into his social and cultural groups. Since André's son is a basketball player, he could help him train by feeding him passes, allowing him to observe his son's actions. This vicarious experience can have a positive influence on André's feelings of self-efficacy as well as help him to improve his self-confidence about his own capabilities. Group PA can also increase motivation and adherence to PA and provide André with social support.

Recommendations to the Client

1. Avoid intense exercise such as high intensity interval training and instead allot more time towards physical activities (not necessarily in the gym) you enjoy performing daily such as walking, gardening or shooting the basketball with your son.
2. Do not participate in physical activities that produce negative emotions, anxiety or physical exhaustion. Instead direct your energy towards physical activities that produce positive results with regards to your enjoyment and psychological state.
3. Find videos online (e.g., on YouTube) of someone who you feel is similar to you achieving physical activities you are aiming to engage in. This may help you feel you are also capable of doing these activities.
4. Find ways to reduce how difficult your physical activity feels. One way you can do this is to listen to music you enjoy.
5. Set goals to improve physical activities you already engage in. Examples could be working hard in the garden to grow the largest tomato, trying to hit as many free throws in a row as possible, or walking your route in less time than usual.

6. Michael Jordan, Allen Iverson, and Shaquille O'Neal all had different body types, but were all hall of famers. When you are watching NBA games with your son, try to observe players who have a similar physique to you and see how they use their body to their advantage. Maybe you can find something to apply to your own game.
7. Aim to engage in group physical activity outside of a gym setting. This could include joining a recreational sport league with people similar to you or organizing physical activity with your church or friend groups.

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New Physical Activity (PA) Coaching Client Intake Form (*all information is self-reported*)

Name:	Alex Martinez
Age:	24
Self-reported gender:	Non-binary
Cultural background:	Puerto Rican, with a blend of traditional cultural values and American lifestyle influences.
Past PA involvement /experiences:	Was quite active during college (recreational soccer and running regularly). After graduating and starting a desk job, their PA levels decreased significantly. Has tried various fitness programs over the past few years, including gym memberships and online workout videos, but has struggled to maintain consistency.
Self-reported barriers to PA:	Their stressful job with long hours makes it difficult to find time for regular PA. Often feels unmotivated after a long workday and finds it hard to stick to a routine. Their friends are not particularly active or interested in fitness, which makes it challenging to stay motivated. Self-proclaimed perfectionist so they struggle to continue exercising when they feel they are not achieving the success they want. Does not believe they know how to “workout correctly”.
Motivating factors for PA:	Wants to improve their energy as they feel sluggish compared to when they used to engage in PA regularly. Wants to feel good in their body that has changed (reduced muscle strength and tone, and increased weight) since they started their desk job, negatively impacting their self-esteem.

Social influences:	Their friends are not particularly active, which does not encourage a culture of PA in the little off time they have. Their family supports their desire to increase their PA but are not interested in physically joining them on the journey.
Current PA involvement:	Engages in light PA, such as occasional weekend walks and sporadic gym visits, but does not have a consistent routine. Spends a large portion of their week sedentary at their desk.
PA goal(s):	To build a routine where they engage in PA at least 3-4 evenings per week. To improve their knowledge of how to workout correctly. To improve their energy level and feel good in their body. To improve their self-esteem.

Selected theory or model of behaviour change: Social Cognitive Theory [SCT].

Content integrated from selected course lectures (at least 3): Personality in sport and exercise; Social influences on exercise; Self-esteem, self-concept, and exercise.

Evidence-Based Plan to Increase Client's Physical Activity Motivation and Behaviour

A key tenet of Social Cognitive Theory (SCT) is reciprocal determinism which asserts that an individual's behaviour is influenced by a dynamic interaction, and mutual interdependence, between their inter- and intrapersonal factors, environment, and behaviours (Bandura, 1986). SCT is established on multiple core concepts including: (1) self-efficacy, i.e., an individual's perception of their ability to perform a behaviour successfully, (2) observational learning, i.e., an individual's ability to learn and model their own behaviour through the observation of others, (3) outcome expectations, i.e., the expected results of a behaviour, and outcome expectancies, i.e., the significance individuals attach to those expected results, and (4) behaviour capability, i.e., the level of knowledge and skills required for a behaviour an individual possesses (Bandura, 1986). Based on SCT, an individual is more likely to engage in a behaviour, such as increased physical activity (PA), when (1) their self-efficacy is high, (2) they have positive role models to observe demonstrating their desired behaviour, (3) they believe that the behaviour will result in beneficial outcomes and those outcomes are personally valued, and (4) they have the knowledge and skills required to perform the behaviour (Bandura, 1986). To assist Alex in developing consistency in PA, the main goals will be to build their self-efficacy and perceived social support as research has shown these factors to be the greatest predictors of exercise behaviour (Oyibo et al., 2018).

A key mediator between self-efficacy and behaviour in SCT is goal setting (Bandura, 1986) and so, we will have Alex begin planning achievable behavioural goals. For example, instead of immediately aiming for 3-4 evenings of PA per week, they could begin with short bouts of bodyweight strength exercises 1-2 times per week. Additionally, tailoring goals to PA they already engage in (i.e., weekend walks) could serve as a useful starting point. In order to

provide them with confidence and to ensure their goals align with their values, we will work to set goals together (Beauchamp et al., 2019). Achieving their goals and gaining “small wins” will likely improve their outcome expectations and make them realize that even with their busy schedule, consistent PA is possible. Further, having them involved in creating the goals will improve the outcome expectancies associated with their PA behaviours. In addition, Alex has expressed wanting to feel good in their body and so, this could be incorporated into a self-monitoring activity where they track how they feel, both physically and mentally, e.g., monitoring mood and energy levels in a written journal. By concentrating on improvements to how they feel, Alex may boost their motivation even if they have not achieved every behavioural PA goal set.

An important thing to keep in mind while helping Alex with goal setting is that their perfectionism hinders their ability to maintain a consistent PA routine. Alex demonstrates maladaptive perfectionism and so, our plan will focus on helping them move towards adaptive perfectionism which is positively linked to self-efficacy (Bulina, 2014); to do this, we will work to shift their mindset from unrealistic performance standards and self-criticism toward personal growth and self-compassion in their journey. Therefore, in addition to behaviour goals, we will encourage Alex to reshape the way they set expectations and evaluate success, emphasizing effort over outcome, and progress made along the way over perfection. This process will also be important in helping Alex improve their self-esteem. Currently, they exhibit a poor physical self-concept and self-esteem in relation to both their physical competence and appearance. To improve Alex’s self-efficacy and physical competence we will encourage them to engage in vicarious/observational learning to improve their behavioural capability for exercise. As they have expressed concern about not knowing how to “workout correctly”, we will provide them

will a foundation of knowledge (e.g., proper movement form, importance of warming up before exercise) and also encourage them to watch online videos of busy professionals who document their fitness journeys and share their time-management tips. Moreover, it will be important to address Alex's perception of their physical appearance; if their self-esteem is mainly tied to their appearance, they may become too critical of themselves during setbacks, reinforcing their maladaptive perfectionism as well as subverting their motivation. Thus, we will aim to improve Alex's self-esteem by fostering an acceptance of their physical appearance and an appreciation of their body functionality. One way to shift Alex's focus to their body functionality is through the aforementioned behavioural goals. They will be encouraged to celebrate even small milestones as this can boost their intrinsic motivation and provide a sense of achievement, enhancing their self-esteem.

Alex does not seem to perceive a high level of social support as they have shared their friends are not active and that although their family supports their journey, they do not want to join them physically in their PA. Consequently, our plan for Alex will prioritize enhancing their perceived social support by highlighting that while they may not get companionship social support from friends and family, there are different types of social support that may help them feel encouraged, cared for, and supported in their fitness journey; for example, emotional (e.g., praise, encouragement), informational (e.g., sending videos of fitness tips, providing ideas of PA), and instrumental (e.g., picking up groceries so Alex has time to go to the gym) support may all support Alex's commitment to improving their PA (Scarapicchia et al., 2016).

Recommendations to the Client

1. Set **achievable** behavioural goals for physical activity at the start until you gradually become confident in your abilities and can set new more challenging goals. For example, instead of aiming for 3-4 evenings per week you can start with short bodyweight strength sessions 1-2 times per week.
2. Instead of focusing on changes you see in your body appearance, focus on all the things your body can do. Celebrate even small goals that you achieve as this can boost your motivation and self-esteem.
3. Focus on progress, not perfection. Keep track of improvements to your mood, energy, stress etc. You can use a journal so you can monitor your improvements over time.
4. In our sessions we will go over basics of how to “exercise correctly” (things like movement form, and safe practices), but it will also be beneficial for you to find role models online who are also balancing demanding jobs and physical activity. You might learn tips about time management and strategies to incorporate physical activity into your busy schedule.
5. Even if your friends and family do not physically join you, there are lots of other ways they can support your goal of increasing your physical activity. Think about which of the following types of support you think would be helpful and share it/them with your loved ones: Emotional support (e.g., praising or encouraging you), informational support (e.g., sending you videos of fitness tips, providing you physical activity ideas), and instrumental support (e.g., picking up your groceries so you have time to go to the gym).

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New Physical Activity (PA) Coaching Client Intake Form (*all* information is self-reported)

Name:	Danger Powers
Age:	56 years
Self-reported gender:	Man
Cultural background:	British
Past PA involvement /experiences:	Enjoyed recreational sports (basketball and soccer) in his younger years, but after taking an office job, he has become sedentary, overweight, and feels less strong. Has tried working with personal trainers in the past but missed many appointments because he lacked the motivation to adhere to the strict schedule and did not like to be told what he should do.
Self-reported barriers to PA:	Does not enjoy doing PA alone but friends are not active as he also have office jobs. Lives alone and does not feel he has anyone to connect to through PA. Is not depressed but feels “meh” on most days. Does not feel competent in his ability to work out at the gym or adhere to an exercise program.
Motivating factors for PA:	Interested in getting active with others to lose weight and increase daily PA. Wants to feel good in his body (both mentally and physically) and feel capable of making his own choices.
Social influences:	Divorced. Friends and co-workers are not active.
Current PA involvement:	Sedentary.

PA goal(s):	Wants to lose weight, improve his strength, and increase and maintain daily PA. Wants to enjoy PA with others and feel he can make his own PA choices. Wants to feel more positive on a daily basis.
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Selected theory or model of behaviour change: Self-Determination Theory [SDT].

Content integrated from selected course lectures (at least 3): Group cohesion in sport and exercise; Social influences on exercise; Physical activity and mental health

Evidence-Based Plan to Increase Client's Physical Activity Motivation and Behaviour

According to Deci and Ryan's (2000) Self-Determination Theory (SDT), humans have three fundamental psychological needs: autonomy (i.e., control over one's own behaviours/choices), competence (i.e., capability to achieve one's desired outcomes), and relatedness (i.e., connection to others). When these needs are fulfilled, individuals are thought to experience more sustainable motivation, higher levels of well-being/general functioning, and greater personal growth (Deci & Ryan, 2000). SDT also states that motivation exists on a continuum from amotivation (i.e., lack of motivation) to intrinsic motivation (i.e., driven by inherent interest, enjoyment, or satisfaction), with the latter representing autonomous regulation (Deci & Ryan, 2000). Between these extremes are various forms of extrinsic motivation (i.e., driven by external rewards), ranging from external to introjected, identified, and integrated regulation, from less to more self-determined (Deci & Ryan, 2000).

One of the first steps that can be taken with Danger is to address his goal of wanting to feel good in his body both physically and mentally. When an individual has these types of intrinsic motives, they are more likely to behave with autonomous regulation which is positively associated to PA behaviour (Teixeira et al., 2012). Thus, we will emphasize these motivators by sharing the numerous benefits of PA on both physical and mental health with Danger and asking him to reflect on these motivators on a more consistent basis. One example of how this could be done would be for Danger to maintain a journal (handwritten or mobile) where he tracks his PA engagement as well as how he feels after completing the activity. Overtime this self-monitoring could help him to associate his PA with positive physical and mental health outcomes, reinforcing his intrinsic motivators to engage in sustained PA. To improve the likelihood of positive emotions with PA, it will be important to have Danger participate in PA that he finds

rewarding and stimulating and have him choose PA that fits his work schedule to both increase motivation and perceptions of autonomy, and conversely decrease negative emotions (e.g., guilt) related to missing a workout. Guilt of missing planned PA could also be avoided by encouraging Danger to instead focus on future sessions or to attempt gentler PA such as stretching that can be done briefly. Allowing him to self-select exactly which PA, and at what intensity, to incorporate into his daily life will provide autonomy support (Ekkekakis, 2009).

Furthermore, Danger expressed that he is unhappy with the rigidity of personal training and does not feel competent working out; thus, demonstrating possible exercises with him while emphasizing proper form could help him identify exercises that he enjoys and increase his competence. As well, Danger said he played basketball and soccer in the past, so this could be a good starting point for PA and identity building through the execution of PA which he already has a level of competence. Asking Danger to identify activities he enjoys most could help to create a program that maximizes enjoyment, supports his autonomy, promotes competence, and that appropriately fits PA into his busy schedule. His competence can be further improved by other PA such as attending basketball skills clinics or friendly pick-up games with adults around his age. Care should be taken to guide Danger towards non-competitive group activities as competition has been found to decrease feelings of competence and motivation (Hancox et al, 2018).

Moreover, Danger expressed disinterested in doing PA alone, so it will be essential to identify people he could do PA with to help foster his perceptions of relatedness; for example, Danger could explore local recreational sport leagues, find a walking group, or even organize PA that he could encourage his friends to participate in with him. While Danger reported his friends and co-workers are not active, it will be important that he seeks out opportunities to form

connections with other people during PA. Group PA in the same athletic sphere, with age and skill-matched peers, could help foster a sense of relatedness and help Danger self-identify with the athletically active group as a participating athlete. Internalizing this identity would shift his self-schema from aschematic to an exerciser's schematic could enhance his intrinsic motivation over time (Ntoumanis et al., 2018).

Recommendations to the Client

1. Take time to read about the amazing physical and mental health benefits associated with engaging in physical activity! Consider using a handwritten or mobile journal to track your physical activity as well as how you feel physically and mentally afterwards to monitor the benefits you are experiencing to keep you motivated.
2. Create a flexible exercise schedule each week that fits around your projected work schedule and can be modified (by time or activity) should any issues arise. This will alleviate any pressure you may feel to maintain a strict exercise regime and give you more control over your physical activity sessions.
3. Try to be as active as possible, but don not beat yourself up over missing a workout. If you miss a scheduled workout or physical activity, focus on the improvements that will be made on the next session and not what was missed. You could also try doing quick stretches while you reflect.
4. Look into group activities and events, with age and skill related peers, that you enjoy. This can involve playing pick up sports you have enjoyed previously such as basketball or soccer or attending sports clinic sessions to sharpen your skills while getting fit.

5. From the exercises demonstrated to you, rank them by your level of enjoyment and well focus on the five you enjoy the most for your sessions to keep it fun.
6. Focus on using physical activity for fun and as a method of building a sense of belonging with others. With that in mind, avoid environments that you feel are too competitive.

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New Physical Activity (PA) Coaching Client Intake Form (*all* information is self-reported)

Name:	Luc Bélanger
Age:	21
Self-reported gender:	Male
Cultural background:	French Canadian
Past PA involvement /experiences:	Grew up playing competitive hockey but stopped enjoying it around 15 years old. Despite this he played another 4 years to appease his parents and coach before finally quitting at 19 years old after the added burden of university led him to burnout. Abruptly ceasing all PA, and drinking excessively, led to significant changes in his body appearance; the loss of muscle mass bothered him the most, so he began weightlifting as he feels comfortable in the gym. In the past year, he has cycled between weightlifting 6 days a week to going weeks without working out.
Self-reported barriers to PA:	On multiple occasions he was in a consistent exercise routine but peer pressure from friends led him to skip planned workouts to spend a weekend eating and drinking. Subsequently, he would experience a lot of guilt and struggle to return to his routine for weeks.
Motivating factors for PA:	To maintain his physical fitness despite no longer being involved in hockey. Even though his friends tell him he is the most “jacked” in the group, he aims to build muscle mass to look like the fitness influencers he follows on Instagram.

Social influences:	Lives in a separate city from his family. His friends are all from his university fraternity; describes them as being more interested in drinking, partying, and playing video games than exercising.
Current PA involvement:	He is currently not active.
PA goal(s):	To have a consistent gym routine that is not derailed by missing a session or two. To gain muscle mass to look like his favorite fitness influencers.

Selected theory or model of behaviour change: Self-Determination Theory [SDT].

Content integrated from selected course lectures (at least 3): Social influences on exercise;

Youth involvement and positive development in sport; Body image in sport and exercise.

Evidence-Based Plan to Increase Client's Physical Activity Motivation and Behaviour

Self-Determination Theory (SDT; Deci & Ryan, 2000) is a metatheory encompassing several mini theories. The Organismic Integration Theory within SDT states that motivation exists on a continuum from amotivation (i.e., a lack of intention to engage in a behaviour) to extrinsic motivation (i.e., behaviour performed to obtain external rewards or achieve a specific outcome) to intrinsic motivation (i.e., behaviour performed because an individual finds it enjoyable, interesting, self-rewarding, or stimulating).

In his last few years of hockey Luc was extrinsically motivated to continue playing hockey to satisfy his parents and coach; despite now selecting his own form of exercise (weightlifting) Luc is still extrinsically motivated since his main source of motivation is to increase his muscle mass to look like the influencers he follows on social media. While this form of upward social comparison may be motivating Luc, it can also contribute to a negative body image as research has shown strong associations between social media use and muscular dysmorphia in young men (Ganson et al., 2023). Notably, this is already reflected in Luc as he expresses a preoccupation with his muscularity, despite his friends commenting on the fact he is already quite muscular, and excessive work out routines of weightlifting up to 6 times per week. Thus, in future sessions we will have Luc undergo perceptual, cognitive, and affective body image measures (e.g., The Drive for Muscularity Scale; McCreary & Sasse, 2000) to determine the extent of his body image issues to determine next steps. In the meantime, Luc will be encouraged to focus on body acceptance and body functionality over appearance. If his social media following of fitness influencers is something he wishes to maintain, he will be encouraged to focus on other attributes, aside from musculature, that contribute to their fitness success. As

examples he could focus on videos promoting healthy nutrition, time-management tips, self-care, low-cost activities, etc.

In SDT, it is believed that intrinsic motivation improves adherence to a behaviour (Deci & Ryan, 2000) and so, in order for Luc to overcome his inconsistent routine it will be essential for him to reflect on intrinsic benefits of his physical activity (PA; e.g., help manage academic stress, improved sleep and energy) and to engage in PA that he finds enjoyable. Currently, Luc is focused only on the concept of exercise, which is planned, structured and repetitive, so it will be beneficial to share with him that those intrinsic benefits can also be derived from other forms of PA, e.g., swimming, biking, recreational sports etc. This intrinsic motivation should also be reflected in the content of his goals. Specifically, he should seek to set goals that emphasize health and personal growth rather than solely to improve appearance.

Another key theory within SDT is the Basic Psychological Needs Theory which lists autonomy, competence, and relatedness as essential determinants of behaviour (Deci & Ryan, 2000). Currently, when it comes to his participation in weight lifting, Luc has autonomy, as unlike in his youth he is self-selecting his own exercise, and he has competence, as he feels comfortable in the gym; that said, through out our work together we will also be encouraging Luc to find other forms of PA that he finds enjoyable. In this process it will be important to provide autonomy support, to ensure he is not pressured into participating in any specific PA, and to foster competence by allowing him to engage in PA for which he already feels confident. Moreover, in a general PA sense, the psychological need Luc is missing is the relatedness component because he stated that all his friends/fraternity brothers are not interested in exercise. To fulfil this need for relatedness and belonging, we will encourage Luc to explore new social groups with whom he can engage in PA; for example, he can join a weightlifting or run club at

his university or join social media weightlifting apps such as Corecircle. Further, as Luc enjoys spending time with his fraternity brothers, it is important to emphasize that he can still maintain these friendships while also maintaining a workout routine. To do this, he needs to learn methods to overcome the guilt of missing a planned exercise session; for example, he could focus on the benefits of rest for his body and muscles, engage in shorter PA sessions when he is not feeling up for a large workout, take the time to revisit his PA goals etc.

Recommendations to the Client

1. Your fixation on gaining muscle mass and sometimes excessive quantity of workouts are reflective of a negative body image. Try to instead focus on an acceptance of your body and what it can do rather than just how it looks.
2. Comparing yourself to fitness influencers can contribute to your negative body image. That said there are still great things you can learn from them. Instead of focusing on their appearance, look at how they plan their nutrition, manage their time, and engage in self-care.
3. List out reasons you want to exercise that are not about your body and how it looks. These reasons should reflect personal benefits such as how energized it makes you feel, how much it improves your sleep, and how it betters your ability to study or manage academic stress.
4. While you are focused on exercise (which is a rigid form of physical activity), remember that you can also get benefits from other types of physical activity. Things like walking, swimming, or recreational sports can add variety into your fitness routine.
5. To help you feel like you are not the only person prioritizing your health, explore social settings revolving around physical activity. For example, you could join school athletic

clubs, such as the weightlifting club or run club, or join social media weightlifting apps such as Corecircle.

6. Missing a planned exercise session to spend time with your fraternity brothers can lead to derailing of your routine when you choose to focus on the guilt of missing that session. Instead, if you miss a session try focusing on the benefits of rest for your body and muscles, engaging in shorter physical activity sessions when you are not feeling up for a large workout, or taking the time to revisit your physical activity goals; this will help keep you motivated and on track.

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New Physical Activity (PA) Coaching Client Intake Form (*all information is self-reported*)

Name:	Mustafa Ahmed
Age:	50 years
Self-reported gender:	Man
Cultural background:	Egyptian
Past PA involvement /experiences:	Amateur boxer turned coach and boxing gym owner. Has not competed in 15 years. Now has struggles to maintain his breath during training sessions and feels as if he has lost muscle mass.
Self-reported barriers to PA:	Constantly thinking about starting to work out regularly and has created workout plans for himself but never implements them because he feels he is “too far gone” to get back to boxing shape and that PA will not be effective. Afraid to injure himself in front of his students or be seen to do exercises incorrectly. Finds himself getting frustrated and aggressive when he cannot keep up when sparring younger students in the ring.
Motivating factors for PA:	Another coach passed away recently who was not fit in their older years. Wants to stay fit to keep up with and inspire the younger boxers training in his gym, and to live a healthier and longer life.
Social influences:	Other boxers, boxing coaches.
Current PA involvement:	Training others in the boxing gym daily.

PA goal(s):	Create a habit of daily PA that can get him back into “boxing shape” (i.e., have better endurance and strength). Engage in training without allowing frustration to turn into aggression.
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Selected theory or model of behaviour change: Transtheoretical Model [TTM].

Content integrated from selected course lectures (at least 3): Aggression and moral behaviour in sport; Leadership in sport and exercise; Social influences on exercise; Coaching psychology; Self-esteem, self-concept, and exercise.

Evidence-Based Plan to Increase Client's Physical Activity Motivation and Behaviour

The Transtheoretical Model (TTM) suggests that behaviour change occurs through progression of distinct stages. These include: (1) precontemplation, where individuals do not recognize a need for change, (2) contemplation, where they are aware of the need for change, but have not committed to action, (3) preparation, where they plan for change, but have yet to take action, (4) action, where they begin to change their behavior and adopt new habits, (5) maintenance, where they sustain the change, and occasionally, (6) relapse, where they can return to previous behaviours after making a change (Prochaska & Velicer, 1997). Stage progression is influenced by an individual's self-efficacy (i.e., confidence to make and maintain a change in behaviour), decisional balance (i.e., weighing pros and cons), and processes of change (i.e., cognitive, affective, behavioural strategies) to progress through the stages (Prochaska & Velicer, 1997).

Mustafa is considering starting an exercise routine and has created fitness plans but has yet to implement them; according to the TTM, this puts him in the preparation stage of change and on the cusp of action. This lack of progression in stage of change likely stems from Mustafa's feeling of being "too far gone" and concerns about injury or embarrassment if seen doing the exercises incorrectly. It appears he lacks the self-efficacy necessary to change his body and lifestyle, and his decisional balance currently sees the risks of injury and embarrassment as outweighing the benefits of physical activity. To this end, efforts must be made to increase Mustafa's feelings of self-efficacy and to use positive motivation to show him that he is increasing his body health and possibly adding years to his life by participating in regular PA. Having Mustafa set and complete achievable goals for skills and techniques he already has a mastery of can show him the benefits of his actions and increase his self-efficacy (McEwan et al,

2016). There is an increase in perceived benefits of PA at every forward stage transition, so if it's possible to move Mustafa out of the preparation stage (and into action) through expressing the positive benefits of PA, increasing self-efficacy and motivation, and helping to tip the decisional balance scales in his mind regarding the pros and cons of PA (Marshall et al, 2001). The pros begin to outweigh the cons in the decisional balance when the individual enters the action stage (Sarkin et al, 2001). Positive reinforcement of health benefits of PA and minimizing influences that might undermine their confidence or raise fears of injury can further support this shift. Mindfulness exercises have been shown to contribute to positive health behaviours and predict PA self-efficacy (Neace et al, 2022); as well, self-talk, meditation and imagery have been shown to increase sport activity performance (Kim & Kim, 2021). These strategies could all foster Mustafa's commitment to PA and help advance him into the action stage of the TTM.

Further, it is important that Mustafa take steps to reduce his feelings of frustration when unable to keep up with his students as this can lead to aggression, decreased coaching performance, and negative feelings toward PA. Two processes of change introduced by Prochaska and Velicer (1997) can be introduced to Mustafa; specifically, he should be made consciously aware of the problem with his aggressive tendencies and its impact on those around him and he will also need to practice stimulus control by managing the triggers of his aggressive behaviours and finding alternative behaviours, e.g., pausing the activity if he is becoming aggressive. Having Mustafa attempt to emulate the actions and behaviours of boxers who show sportsmanship and poise in the ring in the face of adversity can help provide a role model in which he can model his boxing behaviours around. Mustafa may feel as if he has to self-present as 'tough' being the coach of a boxing gym and efforts should be made to disassociate this self-presentation with his identity. Setting a good example and positive, clear, two-way

communication are keys to effectively coaching youth sport (Van Mullem & Gano-Overway, 2021).

Moreover, working out apart from his students, training at a different gym or in different ways, or incorporating PA while coaching, could be strategies that help Mustafa meet achievable goals and give him an example of how varied PA can increase his overall health. Having another coach at his gym hold him accountable to his workout sessions could strengthen his commitment, increase perceived social support, and encourage a habit of regular physical activity.

Recommendations to the Client

1. Read up on some of the amazing health benefits of physical activity such as increased lifespan and reduced risk of illness and disease. Really think about the value of getting those benefits to motivate you to do more physical activity.
2. Review the boxing skills you have already mastered and focus on a few that you would like to work on. Set goals related to those skills and try to achieve them each session. This could be as simple as increasing your jab count per round.
3. Consider some of your boxing role models and their attitudes towards boxing as well as health and fitness. Look at trying to emulate the way they have maintained their health over their careers as well their behaviours in and out of the ring. Some examples could be Manny Pacquiao, Muhamed Ali, Marco Antonio Berrera and Oscar DeLaHoya.
4. Speak to your colleagues and students about how your aggression impacts them. Reflect on their responses and work to find behaviours you can perform when you're beginning to feel frustrated. For example, decide to stop the activity and take a moment alone.

5. Modify the training of your students so that you are also moving more. For example, this can be done by creating new contact pad drills or joining students when they are skipping or on the speed bag.
6. Increase your accountability to exercise. This can be done by scheduling workouts with others or employing a coach/trainer.
7. Consider using mindfulness exercises, such as positive self-talk, meditation and imaging yourself in positive scenarios. These may help promote positive health behaviours and aggression control in the ring to make you a more effective and transformational coach.

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New Physical Activity (PA) Coaching Client Intake Form (all information is self-reported)

Name:	Kim Ji-woo
Age:	19
Self-reported gender:	Female
Cultural background:	Korean (she moved to Canada when she was seven but was still raised in a household with very traditional Korean culture).
Past PA involvement /experiences:	She played competitive volleyball from 10 to 15 years old and soccer as a child (she quit both sports when her friends all chose to stop playing). For the past two years, she has been on and off with exercising (running and ab workouts) and eating healthy; she is confident in her ability to exercise when she is on her routine but struggles to maintain it due to external pressures.
Self-reported barriers to PA:	Lacks the motivation to keep up with consistent PA and diet because her friends do not support the ways she does it; they express they feel she is being unhealthy. She also says that exercising makes her feel constantly tired, always cold, and she begins to experience hair loss.
Motivating factors for PA:	Her top motivating factor is weight loss, as she says that even though she does not feel she is overweight her mom constantly comments negatively about her body (she is 5'7" and 125 lbs) and expresses pride in her when she loses weight. Does not consider herself an "exerciser" but wants to be.
Social influences:	Friends and her mother.

Current PA involvement:	She does not currently do any PA.
PA goal(s):	To lose weight through diet and exercise without the negative side effects (fatigue, cold, and hair loss) she typically experiences.

Selected theory or model of behaviour change: Transtheoretical Model [TTM].

Content integrated from selected course lectures (at least 3): Personality in sport and exercise; Social influences on exercise; Self-esteem, self-concept, and exercise.

Evidence-Based Plan to Increase Client's Physical Activity Motivation and Behaviour

The Transtheoretical Model (TTM) highlights five distinct stages of change: Precontemplation, Contemplation, Preparation, Action, and Maintenance (Prochaska & Velicer, 1997); respectively, these stages represent when an individual has no intention to change their behaviour, when they begin to think about making a change, when they begin making plans to change, when they successfully adopt new habits, and when they have consistently practiced the new behaviour for an extended time. Progression between the stages is affected by several factors, including an individual's self-efficacy (level of confidence in executing behaviour), decisional balance (the positive and negatives of change), and processes of change (i.e., the cognitive, emotional and behavioural strategies one uses to move through the stages mentioned above; Prochaska & Velicer, 1997). Within the last two years, Kim has never passed the action stage and often relapses to the contemplation stage (i.e., where she is thinking about engaging in physical activity [PA] but not yet planning for it); thus, efforts need to be made to advance her towards maintenance of PA.

Prior to any discussions on engaging in more PA, it will be critical to address Kim's body image and associated weight loss goals. At 5'7" and 125 lbs, her body mass index (BMI; 19.6 kg/m^2) is already on the lower end of normal and losing weight risks putting her into the underweight category. We will share with Kim the risks associated with being underweight including anemia, vitamin and mineral deficiencies, osteoporosis, reduced immunity, cardiovascular disease, dental issues, and reproductive dysfunction (Golubnitschaja et al., 2021). From there it will be important to work with Kim to determine what else she values such as to create new PA goals that are not based on weight or aesthetics.

Kim portrays a high level of self-efficacy when she is in the action stage and in her routine of going on runs and completing ab workouts, however she does not speak to other forms of lower-intensity PA. Our goal is to get Kim engaging in PA in a healthy way and so, she will be encouraged to replace some of her vigorous intensity exercise sessions with enjoyable moderate or low-intensity PA; this could look like going on walks, recreational swimming, flat-ground biking, yoga, or stretching. This will be important as although her self-efficacy for exercise is high in the action stage, she often relapses to earlier stages of the TTM as a result of the negative consequences of her diet and exercise regimen. In the TTM framework, this reflects a shift in her decisional balance where in the action stage her perceived pros of exercising (making her mother proud) outweigh the cons, but her relapse occurs when the cons of exercising (disapproval from her friends, hair loss, fatigue) outweigh the pros. To help Kim maintain a positive decisional balance, and subsequent consistent and healthy PA routine, we will help her understand the benefits and importance of PA beyond weight loss (through pamphlets, YouTube videos, journal articles, etc.) and show her how to avoid the negative physical consequences of PA she is currently experiencing by slowly progressing PA intensity/duration and sustaining a diet that gives her the energy to engage in PA. Proper nutrition (quantity and quality) as well as maintaining hydration are critical elements of both health and PA performance (Bonci, 2011), so this will be emphasized to Kim.

Furthermore, Kim's personality explains her unstable involvement in sports and exercise. Just like when she was a child and teenager, she bases her PA involvement on her social influences. In addition, although she shows a passion for exercise when she is in her action stage, it is characteristics of an obsessive passion that is derived from external control (her mother's negative comments) and feelings of guilt (disappointing her mother). In our work with Kim, we

aim to lead her to a more harmonious passion where her engagement in PA derives from pleasure and a sense of it being a part of her identity. Currently, Kim has a nonexerciser schema as she does not view herself as an exerciser but it is something that is important to her; to move her toward an exercise schema and harmonious passion Kim must pursue PA for personal reasons she enjoys – not for the approval of her mother or friends. We will have Kim reflect on what she enjoys about PA beyond weight loss and record her thoughts. This “self-reevaluation” process of change will help Kim to assess how developing an exerciser identity will help her change her PA behaviour to a healthier and more sustainable one.

Recommendations to the Client

1. Your current weight and height put you at the lower end of “normal” weight. If you do lose weight, you put yourself at greater risk of developing anemia, vitamin and mineral deficiencies, weak bones, reduced immunity, dental issues, and reproductive issues. You should focus on creating new physical activity goals that are not based in weight loss.
2. Not all physical activity has to be high intensity like your running sessions or ab workouts. Explore moderate and low intensity physical activity that you enjoy such as going on walks, recreational swimming, flat-ground biking, yoga, or stretching.
3. As you explore other forms of physical activity, keep a list of things you believe you would enjoy doing. As you try them out, reflect on how you felt during and after and cross out any activities that you did not bring you enjoyment.
4. Proper nutrition and hydration are critical factors for your health and physical and mental performance. The fatigue, hair loss, and cold you experience when dieting and exercising are likely due to a lack of sufficient calories and nutrients. Focus on improving both the

quality and quantity of your nutrition to ensure you are intaking enough calories to support your physical activity.

5. Write down the reasons you want to improve your physical activity, not why others want you to. As you start engaging in more physical activity, remind yourself of why you are doing it and how YOU are benefiting.

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New Physical Activity (PA) Coaching Client Intake Form (all information is self-reported)

Name:	Sarah Jean
Age:	32 years
Self-reported gender:	Woman
Cultural background:	White Canadian
Past PA involvement /experiences:	As a child, she was a gymnast but eventually quit because of her competition anxiety.
Self-reported barriers to PA:	She had a child, Lucy Jean, 25 months ago. Since then, she has struggled to return to her pre-pregnancy weight; this, in part, is contributing to her depressive symptoms and leading her to be unmotivated for PA. She is part of a <i>Mommy and Me</i> group but feels out of place because other members formed a run club; she was invited to join but she worries about being able to keep up with them and being judged on her appearance. She portrays low physical self-esteem, compares herself negatively to others, and doubts her ability to lose weight.
Motivating factors for PA:	She wants to join the run club with the other <i>Mommy and Me</i> group members to build closer bonds, improve her physical appearance and “fit in”. In addition, she wants to lose weight, which she feels will help her to reduce her post-partum depressive symptoms.
Social influences:	Her major social influences are other moms in her <i>Mommy and Me</i> group, as they all seem to be in fantastic shape. Her family, coworkers,

	partner, and friends consistently say how amazing she looks, and encourage her to be physically active for her health.
Current PA involvement:	Her PA involves running errands, keeping up with her two-year-old, walking to work, and movement as a preschool teacher.
PA goal(s):	Her goals are to lose 20 lbs and run with the other moms in her <i>Mommy and Me</i> group.

Selected theory or model of behaviour change: Theory of Planned Behaviour [TPB].

Content integrated from selected course lectures (at least 3): Anxiety in sport and exercise; Social influences on exercise; Physical activity and mental health; Body image in sport and exercise; Self-esteem, self-concept, and exercise.

Evidence-Based Plan to Increase Client's Physical Activity Motivation and Behaviour

The Theory of Planned Behaviour (TPB) is a model of behaviour change based on the idea that individuals have deliberate control over their behaviour (Ajzen, 1991). This theory links individuals' beliefs to their behaviours through their intention (Ajzen, 1991). Intention is the precursor to behaviour and the stronger an individual's intention to perform a behaviour, the more likely they are to perform it (Ajzen, 1991). Intention has three antecedents that are shaped by an individual's beliefs: (1) attitudes, i.e., positive or negative perceptions about performing a behaviour, (2) subjective norms, i.e., perceived social pressure to perform/not perform a behaviour, and (3) perceived behavioural control, i.e., whether one believes they can perform a behaviour (Ajzen, 1991).

In the TPB, attitudes are shaped by behavioural beliefs which are the anticipated desirable or undesirable outcomes of performing a behaviour (Ajzen, 1991). In Sarah Jean's case, her attitude toward PA is negative as she doubts her ability to keep up in a run club with other moms in her *Mommy and Me* group or to lose weight, and experiences negative emotions associated with a fear of being judged for her appearance; thus, to improve her intention to perform PA it will be important to shift her PA attitudes toward more positive ones. Ajzen (1991) further subcategorizes attitude and highlights the importance of improving both instrumental and affective attitude. For Sarah Jean, her instrumental attitude can be improved by emphasizing benefits of PA beyond only weight loss; e.g., improved health outcomes, higher energy, mental health benefits (Warburton & Bredin, 2017). Moreover, to improve her affective attitude we will need to address her social physique anxiety as she has reported concerns about being judged by the other moms in *Mommy and Me* about her appearance. To reduce this anxiety and contribute to a more positive PA experience, we will encourage her to start engaging in PA on her own or

with trusted people before joining the run club, and to wear clothes that make her feel comfortable. Overall, to increase her PA, it is important to help shift her attitude from a focus on external factors (i.e., others' perceptions and body image) to intrinsic motivators, like enjoyment, social time, or fun (Teixeira et al., 2012). Intrinsic motivation can help her associate PA with positive feelings, personal accomplishment, and excitement rather than anxiety or body changes.

The TPB explains that subjective norms are shaped by normative beliefs which are an individual's perception of the approval/disapproval of a behaviour by relevant people in their lives (Ajzen, 1991). Sarah Jean has shared that her loved ones encourage her to engage in PA and that the moms in her *Mommy and Me* group invited her to join the run club; thus, her subjective norms are a positive influence on her intention to engage in PA and having her reflect on these sources of social support may help improve her motivation for PA.

For the final antecedent to behaviour, the TPB suggests that perceived behavioural control is shaped by an individual's control beliefs, i.e., whether they can perform a behaviour and the ease/difficulty of performing it (Ajzen, 1991). Sarah Jean has low motivation to perform PA because she does not believe she can do it. This lack of motivation stems, in part, from her mental health struggles as Sarah Jean experiences post-partum depressive symptoms arising from her lingering excess weight. As these depressive symptoms contribute to her lower confidence toward PA, we could work to improve her self-confidence and self-esteem for PA. One way for her to improve her PA self-confidence is setting and achieving goals that can be used to track her progress; these goals should go beyond weight loss to include things such as a step count, time spent engaging in PA, running speed, perceived exertion etc. PA self-esteem include joining support groups, positive journaling, and self-affirming speech (Cohen & Sherman, 2014). Engaging in more PA may reduce her depressive symptoms as PA has been shown to reduce

feelings of depression (Mammen & Faulkner, 2013). Sarah Jean's self-esteem in regard to her ability to perform PA may be improved through successful and positive PA experiences, and her body-esteem may improve as she sees positive impacts of PA on her appearance.

Recommendations to the Client

1. Shifting your attitude to physical activity to a positive one will improve the likelihood of you engaging in physical activity. This can be done by reading about benefits of physical activity beyond just weight loss, e.g., positive physical and mental health outcomes, increased energy etc.
2. Reflect on positive reasons to engage in physical activity (e.g. being fit enough to continue to run and play with your daughter) rather than reasons correlated to your weight or approval from others.
3. To reduce your feelings of anxiety about keeping up with the other women and being judged negatively for your appearance, you can begin engaging in physical activity by yourself, or with people you are comfortable around, which wearing clothing that makes you feel comfortable.
4. Your social influences – i.e., your family, coworkers, partner, friends, and the moms in your *Mommy and Me* group – are all supportive of you getting more physically activity. Use this as motivation and don't be afraid to lean on them for support.
5. Set physical activity goals and adapt them as you achieve them. These goals can include but should not be limited to weight loss. Try tracking your step count, running speed, time spent running, or similar measures to monitor your progress.

6. Work on building your self-esteem through a variety of techniques, such as positive journaling, support groups, and self-affirming speech. These activities may help reinforce your belief in your ability to exercise.

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New Physical Activity (PA) Coaching Client Intake Form (*all* information is self-reported)

Name:	Beverly Williams
Age:	70
Self-reported gender:	Female
Cultural background:	Canadian with a Jamaican heritage
Past PA involvement /experiences:	Rarely participated in organized sports or physical education classes. Mostly went on walks with her partner, however, since his passing her PA has significantly declined.
Self-reported barriers to PA:	Experiences joint stiffness and discomfort, particularly in her knees and lower back, which she attributes to aging. Since her partner's death, Beverly has felt a deep sense of loneliness and grief; she has experienced depressive symptoms which resulted in low motivation to engage in PA. Struggles with negative body image, particularly as she notices changes in her shape and skin elasticity due to aging; reminisces on being young and in shape.
Motivating factors for PA:	Wants to improve her mental health, become more mobile, and enhance her overall well-being. Wishes to cultivate a positive body image and feels that regular PA can help her embrace the changes that come with aging. Her doctor emphasized the importance of meeting PA guidelines at her last visit.
Social influences:	Following her partner's passing she lives alone, which has taken a toll on her mental health. Her friends live far away and have difficulty transporting themselves due to age-related issues, resulting in

	infrequent visits. Although her children are supportive, they are preoccupied with their own families.
Current PA involvement:	Primarily short walks around her neighbourhood once in a blue moon. Engages in light gardening, however, she lacks a consistent and structured routine, which has limited her overall PA levels.
PA goal(s):	Work towards establishing a consistent routine that meets PA recommendations shared by her doctor (150 minutes of moderate to vigorous intensity PA, two strength training sessions, balance activities and multiple hours of light PA each week). Improve her joint mobility and alleviate discomfort experienced during movement. Enhance her positive body image and mental health.

Selected theory or model of behaviour change: Theory of Planned Behaviour [TPB].

Content integrated from selected course lectures (at least 3): Aging and involvement in sport and physical activity; Body image in sport and exercise; Physical activity and mental health.

Evidence-Based Plan to Increase Client's Physical Activity Motivation and Behaviour

The Theory of Planned Behaviour (TPB) focuses on three major constructs: attitude, subjective norms, and perceived behavioural control; these constructs are impacted by an individual's beliefs and go on to influence their behaviour by modifying their intention to engage in that behaviour (Ajzen, 1991). In detail, attitudes are an individual's perceptions (negative or positive) about performing a behaviour, and are influenced by the individual's behavioural beliefs, i.e., what they anticipate the outcomes of the behaviour to be (Ajzen, 1991). Further, subjective norms reflect an individual's perception of a social pressure to perform/not perform a behaviour based on their normative beliefs, i.e., whether they perceive a behaviour is supported or discouraged by people important to them (Ajzen, 1991). Finally, perceived behavioural control reflects whether an individual feels they are capable of performing a behaviour, and is shaped by their control beliefs, i.e., perceptions of how easy or difficult it would be to perform the behaviour in light of their perceived barriers (Ajzen, 1991). In our plan for Beverly, we will touch on all these constructs and their antecedent beliefs.

Currently, Beverly already has a positive attitude towards physical activity (PA); her self-reported motivating factors (i.e., seeking to improve mental health, mobility, and body image) demonstrate that she has positive behavioural beliefs about some of the benefits of PA. Beverly's positive attitude may be reinforced if we work to provide her even more knowledge of the physical and mental health advantages of PA. For example, the PA guidelines she expressed were shared with her by her doctor are the Canadian 24-hour movement guidelines for adults aged 65 years and older (Ross et al., 2020) which list the benefits of meeting these guidelines as “a lower risk of mortality, cardiovascular disease, hypertension, type 2 diabetes, several cancers, anxiety, depression, dementia, weight gain, adverse blood lipid profile, falls and fall-related injuries; and

improved bone health, cognition, quality of life and physical function”. These details will be shared with Beverly in addition to the important caveat that even if she is not meeting the guidelines, any progression towards meeting them will still result in some health benefits (Ross et al., 2020).

Furthermore, Beverly’s positive attitude is captured in her behavioural belief that “regular PA can help her embrace the [physical] changes that come with aging”. An important step for Beverly will be to highlight that negative and positive body image are not simply two ends of a continuum and that is possible to simultaneously experience negative attitudes, thoughts, and feelings about one’s body appearance AND positive attitudes, thoughts, and feelings about the body for what it is able to do, what it represents, and its unique features (Bailey et al., 2016; Tylka & Wood-Barcalow, 2015). Pursuing the development of a positive body image will be important for Beverly as people who have a positive body image typically have higher self-esteem and are less likely to suffer from mental health problems, making it an important factor in psychological well-being (Merino et al., 2024). In our work with Beverly, we aim to reinforce her positive attitude toward PA by framing it as an opportunity to prove to herself what her body is capable of. Overtime, PA can help foster a positive body image by enhancing both her physical appearance and function.

Moving to the second antecedent of behaviour in the TPB, research has shown that older adults are generally less affected by subjective norms (Luong et al., 2010). Consequently, adding “social pressure” to engage in PA may not prove beneficial for Beverly; that said social interaction can still increase her motivation and enjoyment in PA. In addition, Beverly's anxiety and sedentary behaviour are exacerbated by her isolation, so putting her in supportive social settings may encourage PA participation. To compensate for her family and friends’ limited

availability or access, Beverly can obtain social interaction by exploring (1) neighbourhood walking groups, (2) virtual fitness communities, (3) senior-friendly group classes or (4) community-based PA programs.

To address Beverly's perceived behavioural control, the third antecedent to behaviour in the TPB, it will be essential to host discussions with her on how to overcome her perceived barriers to PA (i.e., joint stiffness and discomfort, impacted mental health, and negative body image). To improve Beverly's control beliefs toward PA, we will again emphasize benefits of regular PA such as slowed decline of strength, mobility, and endurance (McPhee et al., 2016) and improved mental health and self-esteem (Park et al., 2014). We will also teach her the benefit of "if-then" plans to prevent barriers from keeping her sedentary. To overcome aging-related barriers, we will focus on PA that Beverly finds enjoyable and tolerable (i.e., does not cause significant discomfort); low-impact PA examples she could prioritize are walking, as it is familiar and accessible, gardening and swimming. Finally, to work to reduce Beverly's negative body image we can pull from Higgin's (1987) Self-Discrepancy Theory. In Beverly's case, her negative body image derives from comparing her current physical state to her internalized ideal of when she was "young and in shape". Notably, this type of "body nostalgia" has been reported previously in literature exploring body image in women (Bailey et al., 2016). Although engaging in regular PA may lead to improvements in Beverly's physical appearance, a comparison to her younger self will always result in dissatisfaction with her current state. Instead, Beverly will be encouraged to focus on acceptance of her aging body and gratitude for its functionality (Bailey et al., 2016).

Recommendations to the Client

1. Reflect often on the amazing benefits of physical activity! Some of the benefits listed for meeting the guidelines shared by your doctor are a lower risk of death and disease, improved mental health, reduced risk of falls, and improved bone health, cognitive abilities, quality of life and physical function. Importantly, any improvement to your physical activity levels (even if you are not meeting all the guidelines) will still grant you some of these benefits.
2. It is possible to have both negative thoughts toward your body appearance AND positive thoughts about its function at the same time. While physical activity can improve your physical appearance and function, you can work toward a positive body image by focusing on accepting your body and emphasizing what your body is capable of.
3. Although your friends and family are not always available, you can benefit from social interaction by exploring physical activity groups in your community such as: (1) neighbourhood walking groups, (2) virtual fitness communities, (3) senior-friendly group classes or (4) community-based physical activity programs.
4. Create “If-Then” plans: For instance, something like “If it rains, I will take an online class instead of walk”. These backup strategies make it less likely that an unplanned obstacle will derail your physical activity.
5. Focus on engaging in physical activity that you find enjoyable and that do not cause you joint pain. Examples of low-impact physical activity includes walking, swimming, and gardening which can all still contribute to improved health and mobility.

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Part Four: Student Case Study Submissions

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New Physical Activity (PA) Coaching Client Intake Form (*all information is self-reported*)

Name:	Dominick Hartley
Age:	24
Self-reported gender:	Male
Cultural background:	French Canadian
Past PA involvement /experiences:	Dominick played ice hockey for his university and recreational rugby on the side. Growing up, he was very athletic making him shine in sports like hockey. Post graduation he finds himself busy and overworked which has been the past two years.
Self-reported barriers to PA:	Dominick works irregular and unpredictable hours in investment banking. He often takes his work home with him due to the demanding nature of it. Since being employed, Dominick has continuously sent money back home to his parents as they only live off one income due to illness. This has driven him to work extended hours to provide making it difficult for him to pursue his passions in sport and PA.
Motivating factors for PA:	Upon medical exam, it was revealed that Dominick has developed hypertension and has a body mass index of twenty-eight, nearing obesity. If Dominick leaves these conditions unaddressed it could lead him to cardiovascular disease, diabetes, and cancer which is already prevalent in his family. He aspires to start a family in the future, which he acknowledges he must be in good health for. He is aware that if he

	does not alter his lifestyle, his risk for an early death will be heightened.
Social influences:	Dominick's friends and coworkers have commented that he looks notably different. Their negative feedback is discouraging and has taken a toll on Dominick's mental health. His partner encourages him to join a recreational hockey league and get a gym membership to become involved with PA again. External opinion is causing anxiety around PA for Dominick in not knowing how to get back into a routine.
Current PA involvement:	Currently, Dominick is sedentary as his job is done from a desk. His only PA is walking from his office to his apartment in Montreal which is approximately ten minutes.
PA goal(s):	Dominick is striving to lower his blood pressure to reverse his hypertension. He also wants to work in a PA regimen into his life that encompasses the following: being sociable outside of work, integrating sports in the routine, and leaving personal time.

Selected theory or model of behaviour change: Health Belief Model [HBM]

Content integrated from selected course lectures (at least 3): Anxiety in sport and exercise; Social influences on exercise; Physical activity and mental health.

Evidence-Based Plan to Increase Client's Physical Activity Motivation and Behaviour

The Health Belief Model (HBM) states that a single instance of a specific behaviour is influenced by the individual's perception of the possibility of their health worsening (Rosenstock, 1974). This determines if the individual will act and engage in health-seeking behaviours to reduce the risk to their health. Through this model, an individual's perception of the severity of their illness, susceptibility, benefits and barriers to taking action, all contribute to the individual's health-seeking behaviour (Rosenstock, 1974). The client, Dominick, perceives the risk of developing diabetes and cancer as severe as he has a family health history of cardiovascular disease. Dominick acts by pursuing physical activity (PA) coaching to keep his health from deteriorating due to his high body mass index and his recent diagnosis of hypertension. With this perceived threat, Dominick's likelihood in changing his behaviour relies on potential benefits of engaging in PA and if it will aid in reducing his chance of developing cardiovascular disease (Rosenstock, 1974). The client believes he can lower his blood pressure and body mass index by participating in team sports such as hockey and rugby, both sports in which Dominick participated in high school. Despite this, Dominick is still faced with barriers to his health-seeking behaviours, such as the discipline and time required for these changes, his low self-esteem, accessibility to the gym, and the finances involved with these activities. Lastly, the HBM comprises of modifying factors that affects the client's perception of their ability to engage in PA activities, such as personality variables, socio-demographic factors, and cultural background (Rosenstock, 1974). Dominick is determined to engage in health-seeking behaviours to improve his quality of life and longevity as he aspires to start a family. Moreover, Dominick's cultural background aligns with his socio-demographic environment and enables him to communicate easily with those around him, which will aid in his social support as he continues

to play team sports (Kitchen & Chowhan, 2016). Given hockey's prevalence in Montreal, opportunities to join recreational leagues would be readily available. Despite this accessibility, Dominick's low self-esteem and social physique anxiety may prevent him from participating in these group activities, risking a return to a more comfortable, sedentary lifestyle (Zartaloudi et al., 2023).

With making PA feasible within Dominick's demanding and irregular work schedule in investment banking, a focus on time management is essential. He will begin with small, efficient steps to build a routine that will blend seamlessly into his day, as regular physical activity has been proven to lower rates of anxiety compared to those who are inactive (Strohle et al., 2007). Since Dominick undergoes sedentary behaviour due to his occupation, light-intensity PA and enjoyable activities (hockey) can help increase the frequency of participation and intensity. Furthermore, PA can improve Dominick's self-efficacy as he continues to play hockey and exercise (Tikac et al., 2022). Witnessing bodily changes and mindset changes when it comes to PA can improve his self-efficacy and self-esteem as he accomplishes goals (Kitchen & Chowhan, 2016). In turn, incorporating social interaction and new support groups also motivates Dominick to improve in team sports and build new goals. Dominick can benefit from a positive group environment, such as a men's hockey league with others in his age group and skill level. This participation allows Dominick to develop the perception of distinctiveness among other players and increases group cohesiveness as these teams consist of around 15-22 players (Kitchen & Chowhan, 2016). Moreover, the effort displayed by those around him can cause Dominick to exert himself and have more enjoyment and interactions with teammates (Kitchen & Chowhan, 2016). Another motivating factor would be for Dominick's partner to join him at the gym, as this companionship would allow him to take accountability for exercising and increase enjoyment

due to emotional support. Individuals who exercise with their partner regularly have better attendance in the gym and a lower dropout rate compared to those who exercise independently (Pentecost & Taket, 2011).

To overcome perceived barriers, Dominick can initially start with light intensity PA such as walking to work or short home workouts, as these short bouts of exercise are easy to commit to and cause minimal disruption to his workday. They are also just as effective as longer bouts of PA (Schmidt et al., 2001). Not only will this allow him to rebuild his confidence but also establish a baseline level of fitness before transitioning to public environments. As he progresses, Dominick can track his performance using a fitness app, focusing on small, achievable goals such as daily step counts or improving his blood pressure readings. This measurable progress will serve as a tangible cue to action, reinforcing the benefits of his efforts and motivating continued commitment (Epton et al., 2017). We are making it known to Dominick that all progress including small is still a step forward. Building flexibility into this plan is a crucial factor; for example, if Dominick's work extends into lunch hours, he can shift his PA time to early mornings or evenings. Framing PA as a non-negotiable in his routine will cause it to become an ingrained habit over time. Nevertheless, Dominick experiences social physique anxiety and competitive trait anxiety as he is worried about receiving negative comments about his body image and his hockey skill level. Due to his low self-esteem and social physique anxiety, it has caused him to avoid exercise and situations in which he believes he will be negatively evaluated (Zartaloudi et al., 2023). To combat this, Dominick will attempt various self-regulation strategies such as positive self-talk and imagery to help his self-esteem while on the ice. Furthermore, his aspirations of supporting his future family provides an even deeper source of intrinsic motivation.

Lastly, prioritizing self-efficacy using the HBM will ensure that Dominick experiences small, meaningful successes early into integrating this new routine in his life. By starting with a lower intensity goal such as daily step count or one hockey session per week will still yield results before PA frequency is increased. With noticing improvement in his physical health and mental well-being, confidence in maintaining this PA regimen will increase (Han et al., 2022). This includes external motivators and positive feedback from his partner and other social connections through sport which will help to reclaim his identity as an athlete.

By adopting this structured, time-efficient approach to PA, Dominick can effectively overcome the barriers that are posed by his demanding career and sedentary lifestyle, paving the way to improved health, increased balance between life and work, and a newfound confidence to pursue a fulfilling yet active life.

Recommendations to the Client

1. Consider taking longer routes to and from work to help increase your overall physical activity, you can start solely taking the stairs at work instead of elevators/escalators.
2. Remind yourself that PA helps manage hypertension and reduces the risk of developing cardiovascular diseases, keeping you focused on your long-term goal of starting a family.
3. Incorporate time with your partner to exercise together by going for walks, running together and doing light-intensity exercises at home. Ask for emotional support and accountability from your partner to ensure PA becomes part of your daily routine.
4. To achieve your PA goal of being sociable outside of work, join a local recreational hockey club with a flexible schedule to accommodate your unpredictable work hours.

This way you can gain confidence in your athletic abilities.

5. Start tracking daily PA on fitness apps to help motivate the incentive to create new goals.

Tangible progress will serve as your motivation to continue. Feel proud of your efforts!

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New Physical Activity (PA) Coaching Client Intake Form (*all information is self-reported*)

Name:	Gary Rogers
Age:	31
Self-reported gender:	Male
Cultural background:	White Canadian
Past PA involvement /experiences:	He played competitive football in high school, but a knee injury in his senior year ended his athletic career; it still affects him psychologically today. Gary tried to be active, post-recovery, but felt afraid that he might reinjure his knee. He has not been highly active since then.
Self-reported barriers to PA:	Gary fears reinjuring his knee, a cause of significant distress. Because of his sedentary behavior and inactivity, he doubts his athletic and physical ability. Consequently, Gary has gained a significant amount of weight and experiences poor body image, which perpetuates his low self-esteem.
Motivating factors for PA:	Gary is motivated to lose weight and improve his body image. He wants a more active social life as he does not get to socialize much due to his sedentary behavior, and he wants to feel better about himself.
Social influences:	His best friend, Tom, just recently joined a local recreational pickleball league, and is Gary's physical activity role model.
Current PA involvement:	Minimal, other than daily 15-minute walks with his dog.

PA goal(s):	Increase muscle tone and lose body fat. Improve cardiovascular health and energy levels, to be able to go on longer walks with his dog. Join an intramural or recreational team.
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Selected theory or model of behaviour change: Social Cognitive Theory [SCT]

Content integrated from selected course lectures (at least 3): Stress, emotion, and coping in sport and exercise; Social influences on exercise; Physical activity and mental health; Body image in sport and exercise; Self-esteem, self-concept, and exercise; Group cohesion in sport and exercise.

Evidence-Based Plan to Increase Client's Physical Activity Motivation and Behaviour

Social cognitive theory (SCT) is a cognitive-behavioral approach that draws on social and cognitive psychology (Bandura, 1998). SCT includes several constructs, such as observational learning, reinforcements, outcome expectations, outcome expectancies, and self-efficacy (Bandura, 1997). When individuals have good self-efficacy, the desired behaviour is more likely to occur (Bandura, 1998). Self-efficacy is influenced by numerous factors such as mastery experience, vicarious experience, social persuasion, and physiological and affective states, including physical and emotional cues linked to performance and behaviour (Bandura, 1997). A fundamental tenet of SCT, reciprocal determinism, emphasizes the interaction of behaviour, personal factors, and the environment and how each continuously influences the other (Bandura, 1978).

Bandura (1998) states that the most effective way of creating a strong sense of efficacy is through mastery experiences. This can be accomplished by creating measurable and achievable physical activity goals that Gary can monitor and gradually increase in both challenge and difficulty over time to match his skill level consistently and appropriately. This can be enhanced by tying rewards to goal achievements, as self-incentivized people accomplish more than those who perform the same tasks without self-incentives (Bandura, 1998). Furthermore, creating achievable goals can help Gary relieve body-related guilt and low self-esteem as he experiences success in accomplishing his goals (Lox et al., 2014). Successes will strengthen his belief in his ability to succeed and, in turn, encourage the desired behaviour. Mastery experiences impact self-esteem as a sense of accomplishment is rewarding (Lox et al., 2014). Increasing one's level of physical activity can improve body image and self-esteem (Lox et al., 2014) and has also been shown to decrease distress (Cairney et al., 2009).

Goal setting allows people to monitor their behaviour and routine compared to the aspirations of their goals (Bandura, 1998). Gary's physical activity goals should be enjoyable and create positive emotions, as physiological and affective states and emotional cues are associated with performance and behaviour (Bandura, 1997). Slowly building up the frequency, duration, and intensity of his physical activity and incorporating as much social interaction as possible is essential as they have all been demonstrated to foster positive affect while engaging in physical activity (Crocker et al., 2023). Exercising in nature has also been shown to enhance enjoyment (Twohig-Bennett & Jones, 2018). Since Gary has a fear of reinjuring his knee, low-impact activities like walking his dog can be an ideal form of physical activity to engage in. Even moderate levels of exercise can enhance his sense of well-being (Crocker et al., 2023).

Moreover, light-intensity physical activity is recommended to displace high levels of sedentary behaviour (Ekkekakis et al., 2011). Gary already enjoys short walks; continuing to increase the duration of these walks by measurable amounts according to his goals would increase self-efficacy since "past performance is considered the most powerful method of developing self-efficacy" (Pekmezi et al., 2009, p.17). With higher self-efficacy judgments, physical activity behaviour may increase by enhancing the perceived enjoyment of physical activity (Lewis et al., 2016).

Vicarious experience plays a crucial role in developing self-efficacy. Seeing similar people succeed through sustained effort raises the observer's belief that they can succeed (Bandura, 1998). Gary's best friend, Tom, recently started playing in a recreational men's Pickleball league after prolonged physical inactivity. Tom wants to persuade Gary to join the league. While Gary is interested, he is not yet confident enough to participate. However, watching Tom's games could be beneficial in fostering his long-term goal of joining the league.

By observing men like him have fun and succeed, Gary's level of self-efficacy can increase because he identifies with them. Observational learning can help develop the knowledge and skills necessary for behavioural changes (Kazemi et al., 2020). Seeking social support from friends and teammates is an important coping strategy that can ease distress regarding physical activity. Attending pickleball matches would allow Gary to cope by planning steps to manage the situation in advance (Crocker et al., 2023).

By attending these games, Gary will observe outcome expectations, described as anticipated outcomes of a specific behaviour (Bandura, 1997). If Gary decides to join Tom's pickleball league, the team's cohesive atmosphere will increase enjoyment and willingness to attend (Crocker et al., 2023). Gary could also consider joining a dog walking group as social support is a key factor in one's continued participation in exercise, and individuals with more available sources of social support are more likely to participate in physical activity (Lox et al., 2014). Expanding Gary's social support network can create opportunities for social persuasion. Social persuasion is vital for strengthening people's beliefs that they have what it takes to succeed (Bandura, 1998).

Finally, outcome expectations reflect an individual's belief about what will result from engaging in specific behaviours (White et al., 2011). It is vital to explain to Gary the benefits of healthy behaviour and its potential effects on his life (White et al., 2011). Higher outcome expectations are related to greater physical activity participation (White et al., 2011). Creating clear and consistent expectations with Gary could allow him to see the potential benefits of these new activities.

Recommendations to the Client

1. **Set Realistic, Achievable Goals:** Develop short-term goals that can be monitored, such as walking the dog for an additional 10 minutes per week. Reward yourself when you achieve your goal.
2. **Emphasize Enjoyable Activities:** Focus on activities you find enjoyable, such as dog walking or recreational sports. Consider doing these activities outdoors, in nature, to enhance the experience.
3. **Introduce Low-Impact, Safe Exercises:** Participate in low-impact activities, such as walking, swimming, and cycling, as they would help minimize your fear of knee reinjury while promoting confidence through gradual successes.
4. **Enforce Social Support Networks:** Develop social connections with supportive people and create a schedule for being active together.
5. **Encourage Observational Learning:** Attend pickleball league games and watch peers being active and excelling.
6. **Create Outcome Expectations:** Seek out information regarding the benefits of physical activity, such as improved mood, higher self-esteem, and better overall health.
7. **Promote Group-Based Physical Activities:** Incorporate group-based physical activities into your weekly schedule by joining a pickleball league or dog-walking group.

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New Physical Activity (PA) Coaching Client Intake Form (*all information is self-reported*)

Name:	Claire Friedman (she/her)
Age:	23
Self-reported gender:	Female
Cultural background:	White Canadian
Past PA involvement /experiences:	Was a highly competitive swimmer from the age of 6 to 16. Continued to stay active for years after, but ever since the COVID-19 pandemic, Claire has found herself adapting to a more sedentary lifestyle.
Self-reported barriers to PA:	Her athletic career as a competitive athlete came to an end due to a multitude of reasons. Including but not limited to body image, mental health struggles, and low self-efficacy and motivation. As a result of dropping out of swimming so suddenly, Claire left many of her friends, leaving her with limited social influences to keep her active and now low self-esteem due to her adaptation of a sedentary lifestyle. Another barrier Claire faces is a heavy school and work schedule, leaving her with very little time to engage in physical activity (PA). Much of her school work takes place through a computer, heavily increasing her screen time.
Motivating factors for PA:	Claire wants to become more physically active as she has met new friends in university who are frequently active and invite her to

	join, yet she is feeling hesitant due to her previous experiences.
Social influences:	School friend group, co-workers, and the university gym offers different programs promoting PA in group settings.
Current PA involvement:	Her current PA consists of daily errands and commuting for convenience by public transportation to and from campus for her masters program, despite it only being a 20-minute walk. She also works a desk job as a receptionist three times a week.
PA goal(s):	Increase her confidence in being physically active and getting involved in activities with her school friends. Claire also wants to work on her time management skills, so she is able to fit PA into her busy schedule.

Selected theory or model of behaviour change: Social Cognitive Theory [SCT]

Content integrated from selected course lectures (at least 3): Body image in sport and

exercise; Physical activity and mental health; Social influences on exercise

Evidence-Based Plan to Increase Client's Physical Activity Motivation and Behaviour

Social Cognitive Theory (SCT) hypothesizes that human behaviour is ultimately influenced by three key factors, behaviour, personal/cognitive factors, and environment (Bandura & Wood, 1989). A core principle in SCT is reciprocal determinism, this describes the continuous interaction and influence between these three factors, though this does not mean they always affect each other simultaneously, or in equal amounts (Bandura & Wood, 1989). SCT emphasizes the importance of self-efficacy as a main component of human behaviour, this entails the belief that one has in themselves to complete a task with effective preparation, cognitive ability, and motivational capabilities (Bandura & Wood, 1989). If people don't believe that they can produce a desired outcome from a task, they have little motivation to complete these acts (Bandura et al., 1996).

The best way to strengthen self-efficacy using a key tenet of SCT is mastery modeling. This consists of the use of modeling as a learning tool, where Claire can observe what works and what doesn't for someone else completing a task, then base her behaviour during the task on what she observed from others (Bandura & Wood, 1989). SCT highlights the interaction between personal, behavioural, and environmental factors, making it helpful for understanding Claire's challenges. Body image, how we see, think, and feel about our bodies, strongly influences physical activity (PA). Claire's negative body image from her swimming career creates emotional barriers like anxiety and self-consciousness, discouraging her from being active. On the other hand, positive body image can motivate consistent PA by promoting body acceptance and confidence (Reel et al., 2015). Embracing her body's abilities, rather than criticizing its appearance can help Claire in many ways. Using a tool such as journaling about her positive PA experiences and joining classes with her friends, can motivate Claire to be more confident in her

body and its abilities. Building confidence through small successes and encouragement from friends can strengthen her belief in her abilities. Social support is also important; joining her friends in casual, inclusive activities can provide accountability and reduce isolation. Fostering intrinsic motivation by focusing on how PA improves her energy and mood, along with self-monitoring and celebrating milestones, will help Claire maintain progress. By emphasizing her body's value beyond appearance and creating a supportive environment, Claire can develop a lasting, positive relationship with PA and improve her well-being.

Self-efficacy positively affects the levels of stress and depression experienced by athletes, furthermore, increasing one's self-efficacy also increases their feelings of motivation (Bandura & Wood, 1989). Claire does not have belief in herself to complete PA tasks, this results in higher levels of stress, decreasing her desire to continue the exercise behaviour (Bandura & Wood, 1989).

Sedentary behaviour and mental health have an inverse relationship, which can put individuals at a much greater risk of suffering from poor mental health (Zhai et al., 2015). Claire describes her lifestyle as always on the go, with balancing a masters degree, working, and a social life. Although she lives a busy lifestyle, her PA is at an all-time low as she has adopted sedentary habits, for example, taking public transportation to and from school and over 8 hours of screen time a day. The first step to improving Claire's PA which will also be beneficial for her mental health is limiting her screen time. In reference to the Canadian Society for Exercise Physiology, 24-hour movement guidelines, adults 18-64 should limit their recreational screen time to three hours (Ross et al., 2020). High quantities of screen time have been associated with depressive symptoms (De Rezende et al., 2014). In reference to the SCT, Claire can use this statistic to motivate her to take action towards increasing her PA to help with her self-efficacy.

With the exception of the majority of her schooling and work being online, she can limit her screen time and increase her PA by taking short walks outside or even just sitting outside, when she has breaks. Evidence suggests that incorporating PA into your daily schedule will help reduce the onset of depression (Mammen & Faulkner, 2013). This will guide Claire in the right direction to rediscovering the benefits of PA on her mental health, leading to greater self-efficacy. With the application of the suggestions such as decreasing screen time and finding time to be outside, Claire will notice an increase in her self-efficacy and ongoing benefits of personal growth. These factors will help Claire with her confidence as she rediscovers her love for PA, and help with adherence to consistent PA and decrease her symptoms of mental health, overall enhancing her well-being.

Bandura and Wood (1989) state that cognitive, vicarious, self-regulatory, and self-reflective processes hold a central role in SCT. This tells us that it's important for Claire to analyze factors influencing her self-regulatory processes such as self-efficacy, emotions, and motivation. Furthermore, it's important to focus on influences to Claire's self-reflective processes, such as her social relationships and interactions.

Due to Claire's past fitness level, it can be hard to acknowledge that a lower level of fitness is still acceptable when her friends are more active. The SCT suggests that self-efficacy, shaped by past experiences and social comparisons, plays a significant role in influencing behaviour. Claire needs to adjust her perception of PA to align with her current lifestyle. It's easy for her to fall into the trap of feeling like a failure because her PA levels are lower than they were at the age of 16. However, this mindset can lead to a negative psychological spiral and leave her feeling less motivated (Ramdinmawii, 2024). Claire needs to create a new goal for her PA using her current schedule and surround herself with supportive and encouraging people to achieve

those goals. Observing her friends' positive behaviour toward physical activity and joining in can help her develop a stronger belief in her ability to stay active. It is important that she takes advantage of the opportunities in front of her, such as her friends inviting her to join in on a workout, or walking to campus instead of using public transport. A simple change Claire can make in her daily routine is walking to campus with a friend, which can greatly boost her engagement and daily motivation (Serwe et al., 2011). This positive habit can increase her overall motivation for physical activity and inspire her to join more active outings with her friends. Claire should aim to stay as active as possible at work by incorporating active breaks or using a standing desk. These strategies can help reduce extended sitting time, lowering the risk of health issues (Mantzari et al., 2019). By setting achievable goals and focusing on incremental improvements, Claire can rebuild her confidence and create lasting, positive habits.

Recommendations to the Client

1. Consider walking or biking to get to school and work on days the weather permits.
Furthermore, it would be beneficial to encourage friends to join to increase social interaction.
2. Try to set goals for yourself to join the group physical activity programs offered at the university to increase social levels and confidence in PA through vicarious experiences.
3. Consider investing in a standing desk and/or walking pad to increase levels of physical activity during the sedentary workday.
4. It is important to find forms of PA that you find enjoyable to increase exercise motivation and behaviour, so consider trying new sports that encourage moving in new and unique ways.

5. Use breaks in between classes or during lunch to sit outside with classmates or go on short walks, to clear your mind and help with limiting screen time, instead of independently scrolling on your phone.

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New Physical Activity (PA) Coaching Client Intake Form (*all information is self-reported*)

Name:	“Samurai Jack” (Jack Smith)
Age:	23
Self-reported gender:	Male
Cultural background:	American, with a strong influence from the general online gamer culture.
Past PA involvement /experiences:	Jack participated in middle school gym classes and played on his middle school basketball team. During this time, he developed a love for basketball and built close friendships. These friendships remain strong, and Jack now lives with them running a successful content creation business in a content house streaming the video game NBA 2K on Twitch to millions of viewers.
Self-reported barriers to PA:	Jack finds it difficult to enjoy physical activity (PA) as much as he enjoys playing video games. He now has a strong fear of incompetence, leading to a general avoidance of exercise. Jack is dedicated to livestreaming for his Twitch community. He feels a strong obligation to provide consistent content and worries that physical activity will disrupt his schedule or disappoint his audience.
Motivating factors for PA:	Jack is motivated to inspire his community and himself to engage in more PA to live healthier and happier lives by showing that it’s possible to balance gaming with PA.

Social influences:	Jack's housemates regularly go to the gym and play basketball at the park to create basketball content. There is also an upcoming 4v4 content creator basketball tournament, and both his friends and fans are encouraging him to participate. His viewers are engaged into his life and seeing him better himself, reinforcing this journey.
Current PA involvement:	Jack does not engage in regular physical activity but will go on walks to the nearby grocery store to get energy drinks.
PA goal(s):	Jack's goals include competing in a 4v4 creator basketball tournament and performing well, balancing physical activity with his streaming schedule, improving his physical and mental wellbeing all while spending more time with his friends.

Selected theory or model of behaviour change: Social Cognitive Theory [SCT]

Content integrated from selected course lectures (at least 3): Personality in sport and exercise; Group cohesion in sport and exercise; Social influences on exercise; Coaching psychology; Physical activity and mental health.

Evidence-Based Plan to Increase Client's Physical Activity Motivation and Behaviour

Social Cognitive Theory (SCT) highlights an interaction between three key factors that shape human behaviour; environmental, personal and behavioral (Bandura, 1986). Reciprocal determinism is one of the main components of SCT, and it describes the interaction between factors and how they influence human behaviour. Another core concept of SCT is self-efficacy, which is a belief in one's ability to carry out a specific activity or task effectively. Self-efficacy can be developed through mastery experiences, vicarious learning and social support (Bandura, 1997). SCT also emphasizes the importance of outcome expectation in shaping motivation.

Self-efficacy refers to an individual's belief in their ability to complete tasks and achieve goals; this can be strengthened through mastery experiences and improving general inferred bodily state (Bandura, 1997). Developing self-efficacy is critical in overcoming barriers to PA (Schunk & DiBenedetto, 2020). Jack's love for basketball presents an opportunity to engage him in more physical activity, as sports are a highly effective and enjoyable way to increase PA participation (Eime et al., 2013). However, Jack's fear of incompetence creates a barrier, leading to the avoidance of PA altogether. Beginning with simple and manageable tasks, such as practicing his shooting on his own, Jack will experience incremental achievements that will help him progressively create the efficacy beliefs required to continue participating in basketball (Zimmerman, 2000). Another part of self-efficacy is the inferred bodily state, which refers to an individual's perception of their physical and mental well-being at any given time. Adopting healthy lifestyle modifications can help Jack better his situation. Making healthier food and beverage choices, in addition to prioritizing his sleeping habits, can raise his energy levels and build a sense of self-care, which has been found to reinforce beneficial behaviours and increase confidence in participating in PA (Anderson, 2006). By focusing on other aspects of health, Jack

can further strengthen behaviors that support consistent physical activity in his life. The second primary concept outlined in the SCT is reciprocal determinism (RD). This idea explains the interdependent influence of three core factors. The first component is behavior, which refers to how an individual's actions and decisions impact their personal factors and environment. The second component is personal factors, which include demographics, cognitive processes, and emotions. The third component is the environment, incorporating all external influences that affect an individual's behavior and personal factors, such as social and physical surroundings (Bandura, 1986). RD is a key aspect of Bandura's SCT as it outlines three categories interventionists can target to change behaviour. When it comes to applying the concept to the client, strategies that address all three pillars will be the most impactful on PA. RD is a key aspect of Bandura's SCT as it outlines three significant categories interventionists can target to change behaviour.

When applying RD to Jack's case, strategies addressing all three pillars will leave significant, synergistic, and lasting impacts on his PA. The first strategy would be to have Jack start a new series of content on Twitch called "Level-Up Mondays." This would be a weekly series highlighting his physical activity journey as he trains, learns and plays basketball. The series will improve his health and encourage his viewers to do the same. This strategy would allow Jack to increase time spent doing PA without having to sacrifice time spent making content. Moreover, creating this content would lead to a supportive environment of fans encouraging him to continue his progress, reinforcing the behaviour and helping with accountability. The second aspect of the strategy utilizing RD would be to begin training with a basketball trainer, with training sessions being a part of the "Level-up Monday series." This strategy would foster mastery experience, decreasing Jack's fears around incompetence and

increasing his beliefs about his abilities to improve athletically through training (Brett & Dubash, 2023). The trainer would create appropriate training schedules around Jack's basketball-specific goals and measure his progress in a way that demonstrates Jack's progress over time. Thirdly, having a trainer adds another layer of accountability and environmental influence. Jack will schedule these regular sessions in advance and have the trainer give him cues for action, ensuring he continues to attend their sessions and keeps up with his training plan. Implementing these aspects of the intervention would help him start and initially maintain his PA. It will become a self-reinforcing habit that directly influences the behavior aspect of RD through consistency and time (Gardner, 2013).

Outcome expectation is the final key component of the Social Cognitive Theory (SCT). It describes the idea that individuals are more likely to engage in PA if they believe their actions will yield tangible and meaningful results (Bandura, 1986). As a physical activity councillor, it is important to emphasize the personal and social rewards associated with physical activity to encourage Jack to reshape his beliefs regarding PA and continue pursuing it beyond the 4v4 basketball tournament. Encouraging Jack to focus on the enjoyment and personal growth experienced during physical activity rather than impressing others can lead to a more task-oriented form of motivation. Jack and his friends will be working towards shared goals like competing in the 4v4 basketball tournament keeping mutual accountability. By highlighting the various benefits of PA, outcome expectations can empower Jack to adopt a healthier and more balanced lifestyle, supported by a community and friends who celebrate his progress.

In summary, the SCT provides a valuable framework for understanding and addressing barriers to PA by leveraging concepts such as self-efficacy, reciprocal determinism, and outcome expectations. Jack can overcome his avoidance of PA by increasing efficacy beliefs through

mastery experiences and inferred bodily states. Integrating these strategies to address behaviour, personal factors, and environment will create lasting behavioral change, enabling Jack to lead a healthier, more active lifestyle supported by his environment and social network.

Recommendations to the Client

1. Start with short-term achievable goals that can be integrated into your daily routine, such as casually shooting hoops.
2. Integrate physical activity into your passion for content creation by engaging your online community throughout your journey and sharing your PA through live-streams or video content.
3. Reframe your approach to basketball as a fun way to connect with friends and your community rather than focusing on competition
4. As you build your confidence, start engaging with your friends in non-competitive games, gradually moving towards more competitive environments, such as 1v1s and then full-court games.
5. Focus on adopting healthier habits, such as getting quality sleep and eating healthier. These habits will help you feel more capable and motivated to engage in PA.
6. Get a basketball trainer to help structure your training, provide feedback, and track progress. This will build your confidence and skill.
7. Look for physical cues of progress along your PA journey, such as increased energy, strength, and better sleep. Be proud of your accomplishments, and let them fuel your motivation to pursue PA!

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New Physical Activity (PA) Coaching Client Intake Form (*all information is self-reported*)

Name:	Sophie Smith
Age:	33
Self-reported gender:	Female
Cultural background:	European-Canadian
Past PA involvement /experiences:	She has experience in gymnastics from her younger days and loves any flexibility focused physical activity. Sophie has participated in pilates and yoga because she likes their ability to reduce tension.
Self-reported barriers to PA:	Her external responsibilities, including parenting demands, work commitments, and lack of structured time, leave her with little energy. Her corporate job adds to this with prolonged sitting and elevator use. Her busy schedule makes consistency a challenge.
Motivating factors for PA:	She views exercise as a coping mechanism for the stress of parenting and working, recognizing its positive effects on her mood and stress levels. Physical activity gives Sophie time for herself and self-care. Social media also motivates her by showing other mothers balancing fitness with similar responsibilities.
Social influences:	Postpartum Health and Fitness: She wants to regain fitness and improve her health to set a positive example for her children. Doctor's Recommendation: Her doctor emphasized regular exercise as key to her long-term health, motivating her to prioritize fitness. Other Moms:

	Seeing her friends prioritize their health after having children motivates her to do the same.
Current PA involvement:	Her current PA involvement revolves around her daily responsibilities as a parent. Doing activities such as walking her children to and from school, engaging in playtime, and managing household tasks.
PA goal(s):	Establishing a Routine: She seeks a sustainable exercise schedule that fits her role as a mother. Joining a Group: She wants a fitness group for regular activity and social connection. Boosting Health: She aims to increase energy, manage stress, and maintain health to support her parenting and personal goals.

Selected theory or model of behaviour change: Self-Determination Theory (SDT)

Content integrated from selected course lectures (at least 3): Motivation and behavioural change; Physical activity and mental health; Social influence on exercise.

Evidence-Based Plan to Increase Client's Physical Activity Motivation and Behaviour

Self-Determination Theory (SDT) deals with intrinsic or extrinsic motivation driven by external rewards or pressures. Where a continuum exists that ranges from external regulation to integrated regulation (Ryan et al., 2009). According to this model, sustainable motivation and well-being are derived from satisfying three core psychological needs: autonomy, competence, and relatedness (Brunet, 2024, Slide 38). Suppose a woman who jogs for joy (intrinsic regulation) or values exercise (integrated regulation) will sustain it longer than one who jogs to avoid guilt (external regulation). Cognitive Evaluation Theory, part of SDT, identifies environments that intrinsically motivate by providing autonomy and competence, while extrinsically motivating environments control behavior (Crocker et al., 2024). Motivating and engaging in physical activity through autonomy-supportive coaching will increase motivation and engagement. Overall, SDT shows that physical activity has significant effects when psychological needs are fulfilled.

Sophie Smith is a mother and corporate professional in her thirties with a hectic schedule. She's struggling to consistently exercise daily. Her current schedule centers around her household duties, such as chores and parental responsibilities. These activities don't have the intensity and organization she wants for her personal fitness goals. Sophie understands how crucial it is to adjust to consistent physical activity in order to increase her energy levels, reduce her stress and improve her long-term health. She seeks a routine balancing parenting with activities that enhance flexibility and reduce stress. Physical activity improves mental health by enhancing quality of life and helps manage stress (Sharma et al., 2024). Sophie views exercise as a way to meet her social needs while enjoying some valuable alone time.

To further support Sophie's motivation and behavioural change through SDT, it's important to focus on fostering her autonomy, competence, and sense of progress. Offering her a range of physical activities allows her to choose what she enjoys, giving her a greater sense of control over her routine. Building her confidence with small, achievable goals, for example, gradually increasing her workout duration or tracking progress with a fitness app or journals, can strengthen her competence as she sees consistent improvement. Emphasizing the immediate mental health benefits, such as reduced stress and improved mood, can enhance her intrinsic motivation and keep her engaged. When we're intrinsically motivated, we participate in an activity for its own sake which is linked to interest and enjoyment (R. M. Ryan & Deci, 2017), as motivation is the reason why we do things we do (Reeve, 2009). By overcoming obstacles with practical solutions and recognizing her achievements, Sophie can build a lasting commitment to physical activity. This approach supports her physical health and enhances her mental well-being, fostering a positive connection with her fitness routine.

To overcome her parenting barriers through SDT and addressing her psychological needs, she can join fitness groups with childcare or child-friendly activities and introduce family activities like yoga and backyard games. This fosters relatedness and intrinsic motivation, allowing her to bond with others and involve her children in enjoyable, and active routines (Brunet, 2024, Slide 36). These activities provide companionship and emotional support while allowing Sophie to be a figure for healthy behaviours and create a positive cycle of motivation for her and her family.

Integrating activities into her workday or household routine supports autonomy by fitting physical activity into her existing routine. Walking to work or stretching during breaks fits exercise into her busy schedule to reduce stress (Robinson et al., 2024), while reframing chores

as mini-workouts applies a cognitive-behavioral approach, turning daily tasks into achievable goals (Crocker, n.d.). These strategies make fitness management sustainable for Sophie, and promotes long-term engagement.

Recommendations to the Client

1. Create weekly schedules that include set times for physical activity. Using a planner or digital calendar to set time aside for exercising encourages you to integrate more fitness into your existing routine which has health benefits.
2. Use fitness apps or journals to track your progress and goals. Logging your workouts and diet keeps you accountable and motivated, reinforcing your commitment to fitness.
3. Begin with achievable goals, then gradually raise your objectives as you gain confidence. Set your goals around things you like, such as stress relief management and being around the kids.
4. Join fitness groups that include your kids and try activities like dancing, backyard games, or family yoga. This way, you can stay active while enjoying quality time with your kids and socialize with others.
5. Integrate activity into your work day by walking or biking to work and taking regular breaks for dynamic stretches, yoga, or meditation. These small steps provide a mental break and help balance fitness with a busy work life.
6. Do small movements while doing household chores to make them more active. Turn tasks like cleaning, organizing, or doing laundry into mini workouts by adding squats or lunges for extra activity.

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New Physical Activity (PA) Coaching Client Intake Form (*all information is self-reported*)

Name:	Lucy Smith
Age:	22
Self-reported gender:	Female
Cultural background:	Indigenous
Past PA involvement /experiences:	Lucy has played in a lacrosse league since middle school and has been practicing multiple times weekly since she was 12. She also runs track twice a week.
Self-reported barriers to PA:	Since moving to a rural area, Lucy faced many challenges. The absence of public transportation makes her commute to practice very time-consuming. Lucy wants to get back into running but feels unsafe in her neighbourhood due to a lack of sidewalks. Living in an isolated area makes Lucy feel disconnected from her teammates and prevents her from socializing. To add, Lucy's negative body image of herself draws her back from engaging in physical activity. Lucy believes aging will cause her to miss future physical activity opportunities.
Motivating factors for PA:	Lucy has multiple intrinsic factors, such as enjoying learning and continuously improving her skills, which build her confidence and self-esteem. She also enjoys being a part of a community with her lacrosse teammates.
Social influences:	Lucy has low social interaction with friends and coaches due to her

	isolated living situation.
Current PA involvement:	She plays in a lacrosse league once a week.
PA goal(s):	Lucy wants to attend lacrosse practice three times a week. She wants to increase social interaction with peers and coaches, increasing relatedness and motivation. As well, wants to engage in physical activity at least 30 minutes per day.

Selected theory or model of behaviour change: Self-Determination Theory (SDT)

Content integrated from selected course lectures (at least 3): Body image in sport and exercise; Self-esteem, self-concept, and exercise; Group cohesion in sport and exercise

Evidence-Based Plan to Increase Client's Physical Activity Motivation and Behaviour

The theory chosen by our group is the self-determination theory. In simple terms, this theory explains motivated behaviour. This theory is broken down into two main concepts. The first, as stated by Radowits (2024), describes motivation as a multidimensional construct, meaning that there are various reasons for an individual to do physical activity. The second construct states how the three basic psychological needs; autonomy, competence, and relatedness, depend on how well an individual meets those needs. Autonomy is the “feeling that one has and/or is in control of one’s own behaviour” (Radowits, 2024), and competence is defined as “the perception that one has the ability to handle challenges and achieve desired outcomes” (Radowits, 2024). Finally, relatedness is the “perception of being connected with others involved in the social context” (Radowits, 2024). This theory breaks down the motivational factors from least self-determined to most self-determined. Starting at the least self-determined, external regulation stated by Ryan & Deci (2000) is the idea of doing physical activity to get a positive or negative outcome. Moving onto introjected regulation, this is when behaviour is performed to avoid feelings of guilt and shame. Identified regulation is when athletes perform a behaviour because they feel valued. Integrated regulation is when a behaviour is executed because of an athlete’s identity and integrated into one’s personality. Finally, the last factor, which is most self-determined on the motivation scale, is intrinsic motivation, which is defined as a spontaneous involvement in sports solely based on enjoying the activity and the overall satisfaction of the athlete (Ryan & Deci, 2017 as stated in Szulawski et al., 2021).

Due to psychological and environmental factors, Lucy experiences various barriers to her desire for physical activity. The first psychological barrier is her lack of self-esteem due to a negative self-image and lack of confidence, these negative affiliations with body image lead to

several health-related factors (Trzesniewski et al., 2006). Regarding environmental barriers, Lucy experiences negative limitations to physical activity due to her physical environment and lack of social cohesion, causing her to feel isolated and alone. These limitations cause Lucy to be overly concerned with her inability to participate in her sporting community because her environment does not allow her to fulfill her physical activity desires. The environment that Lucy is in presents further restrictions impacting her self-esteem and her trips to and from her lacrosse practice. The barriers presented by her environment include no access to public transportation for her to commute to and from her practices and games while also preventing her from doing simple physical activity in her neighbourhood. This is because Lucy states that she feels unsafe in her environment as the infrastructure she is surrounded by is auto-centric, meaning the focus of the roads consists of minimal sidewalks emphasizing the use of vehicles and high-speed traffic, making it unsafe to walk and run along the sides of the roads. As Lucy gets older, she experiences a decrease in her level of participation in physical activity because individuals her age are living a more sedentary lifestyle. A sedentary lifestyle means “an energy expenditure ≤ 1.5 metabolic equivalents while in a sitting or reclining posture during waking hours and not simply the absence of physical activity” (Gretsy et al., 2014, p.905). These are all factors that Lucy faces that will hinder her motivation and ability to participate in physical activity. Although Lucy faces various barriers that may hinder her motivation to participate, she also has a variety of motivational factors. As discussed above, intrinsic motivation is the most self-determined form of motivation. Lucy would like to engage in physical activity more often as she enjoys learning new skills and continues to improve her current skills. She would also like to increase her confidence and self-esteem. Focusing on these desires to learn will allow Lucy to boost her self-concept further and feel better about herself, both physically and psychologically.

Lucy lives in a rural area, so feeling connected with her community and teammates is often challenging. She wants to be engaged and have a sense of purpose within her community, as group cohesion has many social and interpersonal benefits. Participating in group cohesion will allow Lucy to feel involved in a community with shared values and beliefs and feel she has a purpose (Beauchamp, 2008) within her community and team.

Recommendations to the Client

1. Consider investing in a notebook or creating a notes app to track your progress and visually see improved physical activity. Include areas you are doing well in and areas you could improve on.
2. Create a list of goals for the week and how you plan to achieve them. Plan when you will be performing physical activity each day, and try your best to complete the set activities each day.
3. Use encouraging words and phrases to motivate yourself to continue your physical activity journey. Ensure you are in the right state of mind before performing physical activity and in an environment that empowers you and your ability to achieve your daily goals.
4. Try to perform your physical activity tasks with friends who encourage and support you. Surrounding yourself with positive energy will help you believe in yourself and your ability to continue.
5. Understand that life does get in the way, and setbacks could occur. However, remain positive and do not get discouraged by obstacles. When encountering a setback, brush yourself off, set new goals, and continue your journey.

6. Look into community activity events hosted in your rural area to connect with peers of similar ages and cultural backgrounds. These can range from group runs to intramural sports to achieve a daily dose of PA while increasing socialization and confidence in your skin.

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New Physical Activity (PA) Coaching Client Intake Form (*all information is self-reported*)

Name:	Betsy Miller-Jones
Age:	38 (born in 1986)
Self-reported gender:	Female (she/her)
Cultural background:	Betsy was born and raised in suburban West Virginia. While growing up, her upbringing heavily influenced her life as it reflected the blend of modern conveniences and long-standing culture. Betsy was raised in the lower middle class, meaning her family could provide a stable home, food, and education but didn't have the resources for luxuries.
Past PA involvement /experiences:	As a child, Betsy enjoyed biking and gym class but didn't exercise outside school. Despite attempting various workout plans in the past, she struggled to sustain them due to programs that didn't fit her and life commitments.
Self-reported barriers to PA:	Betsy, a single mother with a full-time job and two young kids, struggles to find time for exercise due to the stress and demands of parenting, compounded by her sedentary childhood, low self-esteem, and limited knowledge of healthy activity and diet practices.
Motivating factors for PA:	She wants to be a positive influence on her kids while being able to play more and longer with them. She also wants to increase her self-esteem and overall health.
Social influences:	Betsy's parents never prioritized healthy eating or exercise, and as an

	adult, she's hesitant to join her active friends due to low self-esteem and fear of judgment.
Current PA involvement:	Betsy walks her dog 3 times a week, and goes to the park with her kids on the weekends when she isn't working.
PA goal(s):	Betsy's main goals are to lose weight, gain mobility and achieve functional fitness. By learning healthy eating habits, she believes that it will make her more energized, therefore, increasing her motivation to pursue workouts.

Selected theory or model of behaviour change: Self-Determination Theory (SDT)

Content integrated from selected course lectures (at least 3): Motivation and Behaviour

Change; Sport Psychology Interventions; Social influence on exercise; Self-esteem, self-concept and exercise

Evidence-Based Plan to Increase Client's Physical Activity Motivation and Behaviour

With a sedentary adult burdened by the business of everyday life and kids, building an evidence-based plan surrounding the Self-Determination Theory and its key constructs will be highly effective at increasing the client's physical activity (PA). The Theory of Self-Determination contains three key constructs: autonomy, competence and relatedness. Autonomy is the need one feels to be in control of their own decisions, goals and life. Competence is the need to feel effective at achieving desired outcomes. Relatedness is the need to authentically connect with others and feel involved in the social context (Brunet, 2024a). Self-determination contains many sub-theories. These sub-theories state that motivation exists on a motivational continuum with intrinsic motivation being the most self-determined while amotivation and extrinsic motivation are less self-determined (Manninen et al., 2022). Using a strategy that incorporates interventions that are tailored to Betsy's unique circumstances, such as creating manageable routines, enhancing her confidence, and including her children in her activities to strengthen her purpose can empower her to achieve long-term improvements in her holistic health and well-being (Ng et al., 2012).

To increase PA motivation and behaviour for Betsy, it is crucial to ensure that her PA decisions feel self-directed and aligned with her values and preferences (Brunet, 2024a). An effective approach would be to start small, by more frequently partaking in activities that she already enjoys (Brunet, 2024d). Betsy could commence with walking her dog once per day instead of three times per week. Also, she could continue to walk to the park with her kids, perhaps lengthening the distance by taking them to a beach or similar outdoor spaces. Over time, she could begin to introduce higher-intensity exercise and activities like biking that she previously enjoyed in her younger years. The key here with SDT and autonomy is to present her

options as natural choices rather than obligations (Brunet, 2024a). Since these are all activities Betsy already enjoys, her motivation will be very intrinsic. It is believed that intrinsic motivation has a positive relationship with persistence and concentration in relation to PA (Manninen et al., 2022). By emphasizing autonomy and intrinsic motivation, Betsy feels like the choice is hers. Along with that, she can choose the activities she enjoys and what works best for her lifestyle.

To improve Betsy's competence with physical activity, developing her knowledge, skills, and confidence is necessary to engage her in regular exercise so that she can work towards her goals. Betsy's exercise and nutrition skills are fairly limited due to her upbringing that didn't prioritize either, meaning if she does wish to take better care of herself, she might not always know how. Betsy has shown resilience and a desire to make positive changes for herself and her children, and with the right tools and encouragement, she is fully capable of creating a healthier future. One way of building Betsy's skills and confidence is by setting small and achievable goals to work towards her larger, more impactful ones. Having these small goals can help foster persistence and direct attention (Brunet, 2024d). This can be done by introducing small, beginner-friendly workouts that Betsy can then scale up when she is comfortable doing so. These workouts should be simple exercises so that they can be completed easily at home. Completing manageable tasks would improve Betsy's sense of accomplishment and help her navigate potential challenges, like limited time. While also increasing her self-esteem as it's shown that it typically has a positive relationship with PA (Brunet, 2024b). Another beginner-friendly workout intervention could be to introduce a daily step goal. A daily goal of 7,000 steps suits Betsy's current health and schedule (Tudor-Locke et al., 2011). Betsy could leverage the use of a fitness-tracking device to track her daily steps, exercise time, and calories lost. A pedometer or fitness app could motivate Betsy to exercise outside and track her progress. Reflecting in a simple

journal or app log could help her stay engaged and celebrate milestones. Having trackers can be used as a tool to set goals and improve her awareness of her set of skills. This will eventually allow her to adapt to her PA goals, setting herself up for continued growth and success. This step-goal intervention also goes hand-in-hand with the dog-walking intervention outlined above. Also, based on the achievement goal theory, Lastly, to create long-lasting health changes, Betsy must enhance her nutritional knowledge and skills. She can introduce a meal plan, diets, and participate in online workshops to enhance skills in the kitchen.

Relatedness refers to the need to connect with others and feel involved in social contexts (Brunet, 2024a). The relationship between social support and PA shows that people who have more available support are reported to have greater levels of PA (Brunet, 2024c). Currently, Betsy only has one source of social support (her friends), meaning that she is less likely to have higher PA levels. The fact that she has friends who invite her to activities means that they are most likely good people and will not judge Betsy if she joins. This would also strengthen Betsy's relationship with these friends, which would in turn motivate her more to spend time and do activities with them. This provides a source of extrinsic motivation through external demand. According to the Organismic Integration Theory, extrinsic motivation is less self-determined than intrinsic motivation as it relies on external pressures instead of genuine interest (Brunet, 2024a). However, providing Betsy with sources of motivation (regardless of what type) can help foster authentic enjoyment in the activity, eventually leading to intrinsic motivation with more exposure (James et al., 2019). Encouraging Betsy to explore local activities, like community walking groups or events reflecting her suburban upbringing, can deepen her social connection while fitting her lifestyle. Through this, Betsy could get guidance and advice from those more experienced than her in a supportive nature all while building upon her own set of exercise skills.

Exposing to new communities is also a great way for Betsy to meet new people. Another way to strengthen Betsy's relationships is by encouraging her to involve her children in her exercise routines. This would foster a sense of togetherness and mutual support as well as create shared goals and experiences amongst the family. This also provides intrinsic motivation for Betsy to exercise as she enjoys spending time with her kids. Betsy would also become a role model for her children, providing them with the proper knowledge and skills about exercise and healthy living that her parents never did.

Recommendations to the Client

1. Try going to parks or outdoor spaces with your kids that are further away from your house, along with walking your dog at least once per day.
2. You should try simple workouts from home, during available downtimes. These do not have to be long but can help build good habits and workout skills.
3. Since you're just starting, it is best to keep it simple with goals and exercises. Once you get into good habits and start completing goals, you can increase the difficulty.
4. Search for community facilities that offer low-intensity exercise classes as well as child care and financial relief (such as YMCA or local community centers that are present in your suburban communities). This could be a good way for you and your children to meet new people while also incorporating physical activity into your daily lives.
5. Prioritize healthy choices when grocery shopping, focusing on unprocessed foods such as fruit, vegetables, whole grains, and lean proteins. Planning ahead can make grocery shopping efficient and create a supportive environment for you and your family's health.
6. Consider joining an online or local cooking class that offers affordable, simple, and healthy recipes to enhance your culinary skills and support your wellness goals.

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New Physical Activity (PA) Coaching Client Intake Form (*all information is self-reported*)

Name:	Clara Bell
Age:	18
Self-reported gender:	Woman
Cultural background:	Italian descent (caucasian), grew up in Ottawa
Past PA involvement /experiences:	Engaged in recreational swimming and dance throughout high school. However, since starting university and adjusting to life away from home, she has become more sedentary. During highschool, Clara frequently missed practices due to other priorities of “more importance” (e.g. studying, relaxing by looking at her phone). Wants to use the school's gym, but finds it intimidating and doesn't know how to use the equipment.
Self-reported barriers to PA:	Deemed her primary barrier as her lack of time to engage in regular PA. Now that she is far away from home, she is feeling depressed, lacking in social support from her family, and only used to engage in sports to please her parents. Lacks knowledge on opportunities beyond the gym and has low self-esteem. Experiences low self-efficacy in a new and unfamiliar environment.
Motivating factors for PA:	To revive her “athlete's body” and lose weight she has gained since becoming sedentary. Wants to increase physical strength

	by increasing PA levels and feel confident in her own body.
Social influences:	Has made friends who are high-performance athletes and who regularly go to the gym multiple times a week.
Current PA involvement:	Sedentary.
PA goal(s):	Lose weight, reduce sedentary behaviour, feel less intimidated by the gym, and develop a routine that works with busy schedule.

Selected theory or model of behaviour change: Self-Determination Theory (SDT)

Content integrated from selected course lectures (at least 3): Physical activity and mental

Health; Social influences on exercise; Self-esteem, self-concept, and exercise

Evidence-Based Plan to Increase Client's Physical Activity Motivation and Behaviour

Psychologists Richard Ryan and Edward Deci created the idea of the Self-Determination Theory (SDT), which has since become highly influential in researching the relationship between motivation and human well-being (Ryan & Deci, 2022). SDT revolves around the idea that humans have three inherent psychological needs: autonomy (control over one's actions and decisions), competence (belief in one's own capability to achieve desired outcomes), and relatedness (sense of connection with others) (Ryan & Deci, 1985). The theory explains that when all needs are fulfilled, people tend to experience an increase in well-being and general functioning, greater personal growth, and more sustainable motivation (Ryan et al., 2016).

Self-Determination Theory further explains the importance of intrinsic versus extrinsic motivation. Intrinsic motivation is longer lasting as it is internally driven and self-reinforcing, allowing individuals to experience direct benefits that satisfy their personal needs. In addition, research from Vansteenkiste et al. (2008) suggests that it reduces burnout and increases personal vitality. A key component of intrinsic motivation is self-discipline, which enables individuals to maintain consistent physical activity habits and foster a sense of autonomy. As a result, intrinsic motivation leads to greater commitment to long-term goals (Ryan et al., 1997). In contrast, extrinsic motivation, such as pressure from others, is less likely to lead to long-term engagement in physical activity as it often lacks deep personal connection to the activity itself and is therefore less fulfilling (Vansteenkiste et al., 2008). Therefore, relying on more external sources such as the opinions and relationships of others can reduce sustained commitment to regular physical activity and may undermine intrinsic motivation.

To accomplish Clara's goal of increasing her physical activity, it is recommended that she first becomes comfortable in the gym environment. Clara has low self-efficacy due to her lack of

confidence in her ability to use the equipment, leading to increased feelings of intimidation and anxiousness towards using her school gym (McAuley & Jacobson, 1991). She also has low self-esteem, derived from a lack of physical competence and acceptance (as illustrated in the EXSEM model) of her current appearance and strength levels (Sonstroem & Morgan, 1989). Encouraging Clara to go to the gym with an experienced friend who can show her how to use the machines and guide her on proper exercise form can increase her self-efficacy and competence in maintaining regular physical activity, equally benefitting her mental health (Bauman et al., 2012). By regularly using the gym, Clara will reduce her sedentary habits and enhance her sense of autonomy by taking control of her own workouts. Additionally, she will experience physical changes in her body, such as increased strength and weight loss, which will increase her self-esteem.

Additionally, Clara's dance background may make her more inclined to enjoy alternative exercises offered at her university, such as Zumba or yoga, which closely resemble dance. Her prior experience with similar activities will help increase her self-esteem in these settings. As a result, she is more likely to find fulfillment in this type of movement and increase her chances of reaching the Canadian Society for Exercise Physiology's (n.d.) recommended 150 minutes of "moderate to vigorous aerobic physical activity." Many universities offer a variety of programs to encourage regular physical activity among students, such as the Early Runners Club. These types of programs are offered at set times, making it easier to incorporate exercise into a busy schedule and stay accountable for regular physical activity engagement. This structure could help decrease Clara's sedentary behavior, particularly screen time, which may lower her risk of experiencing depressive symptoms (De Rezende et al., 2014). Moreover, smaller university-funded physical activity programs promote socialization and relationship-building opportunities,

allowing for physical activity engagement to be more enjoyable (Crocker et al., 2025).

Surrounding oneself by others increases effort, performance, and a sense of community, thereby increasing relatedness (Johnson et al., 1995).

Clara also expressed concern about a lack of time and other aspects of her studies and personal time that she prioritizes over exercise. However, exercise does not have to mean a set workout every day—it can be integrated into her day through brief bouts of activity, such as walking or biking to classes or work. Increasing the intensity of these short exercise intervals saves time (with the recommendation being 75 minutes of vigorous activity or 150 minutes of moderate-intensity activity per week), reducing the likelihood of Clara completely neglecting a workout (Canadian Society for Exercise Physiology, n.d.). In addition, vigorous exercises can induce notable benefits, including increased weight loss, better cardiovascular health, and improved mood, contributing to visible progress that leads to increased competence and motivation to exercise more regularly (Lindberg, 2020).

In high school, Clara acknowledged that her participation in swimming and dance was primarily driven by a desire to please her parents, making her motivation extrinsic. Her current lack of motivation stems from the unreliability of external sources of motivation, such as exercising to improve physical appearance. By finding workouts that Clara enjoys and partnering with someone of similar physical appearance and abilities to her, she will gradually shift her motivation from extrinsic to intrinsic, thereby increasing the likelihood of maintaining a consistent physical activity routine (Sabiston, C. & Brunet, J., 2016). This approach will also help her appreciate the act of physical movement itself, rather than focusing on the external pressures or the desire to meet specific appearance standards.

Recommendations to the Client

1. Use one of your high-performance athlete friends to your advantage to show you how to use the equipment at the gym! This will help ease any feelings of anxiety about the gym and help you learn proper form and equipment use.
2. Explore other physical activity options offered by your school! Many universities provide classes such as dance, or zumba as part of your tuition. Alternatively, joining clubs like Early Runners club can help you try out different types of exercise you enjoy and boost your overall fitness.
3. Review your schedule and design a realistic physical activity plan that fits your life, including backup options for busy or stressful times—quick walks outdoors as study breaks, or a 20 minute at-home workout can help you stay active without the stress of a strict routine.
4. Engage in regular short intervals of vigorous exercise alongside longer periods of moderate exercise. Bodily changes will come with consistent physical activity and will make working out feel less like a chore and more like a privilege!
5. Life can get busy, so it's important to be kind to yourself. If you miss a day or can't do your usual routine, don't beat yourself up. Instead, try to find time (even if it's just 10 minutes) to move your body the following day. Consistency is key, not perfection.
6. Find a workout partner who shares similar interests and motivations, and is physically similar. They will not only help hold you accountable for staying active, but also encourage you to push yourself to achieve your goals.

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New Physical Activity (PA) Coaching Client Intake Form (*all information is self-reported*)

Name:	Susan Baker
Age:	36
Self-reported gender:	Female
Cultural background:	Canadian
Past PA involvement /experiences:	She played on her high school soccer team, was active during high school and very competitive. In her 20s, she used to work out as an athlete, such as strength training and cardio. Now, Susan works a sedentary job and spends her free time with her husband and children.
Self-reported barriers to PA:	Susan feels that she has a lack of time and motivation. She believes she is too busy with kids and work, finding it difficult to adhere to PA and make plans due to her lifestyle obligations. Susan is feeling depressed and stressed from not getting enough exercise/activity and is experiencing low self-esteem and negative body image.
Motivating factors for PA:	Susan wants to improve her health to be able to keep up with her kids. She is feeling overwhelmed balancing her work and family and would like to relieve her stress. Susan wants to be more active because she remembers how good it felt in high school and her 20's.
Social influences:	Her sister is a fitness instructor. Susan's husband also wants to get in shape.

Current PA involvement:	Light exercise, walking only 1-2 times a week. Has tried a few of the fitness lessons at her sister's gym but never committed.
PA goal(s):	Susan wants to re-incorporate fitness into her life. She wants to manage stress and increase energy levels. Susan wants to boost her self-esteem, confidence, and her body image.

Selected theory or model of behaviour change: Transtheoretical Model [TTM]

Content integrated from selected course lectures (at least 3): Social influences on exercise; Sport Psychology interventions; Stress emotion and coping in sport and exercise; Physical Activity and Mental Health; Group Cohesion in Sport and Exercise

Evidence-Based Plan to Increase Client's Physical Activity Motivation and Behaviour

Susan's journey toward adopting regular physical activity (PA) aligns well with the Transtheoretical Model (TTM) of behaviour change. The TTM, also known as the Stages of Change Model, outlines a series of stages individuals go through when attempting to modify their behaviour. These stages— Precontemplation, Contemplation, Preparation, Action, and Maintenance— highlight the non-linear process of change, where individuals progress through different levels of readiness and action to sustain lasting changes. Factors that influence stage progression include the process of change (cognitive, emotional, and behavioural strategies), decisional balance (weighing of pros and cons) and self-efficacy (confidence in sustaining behaviour change) (Prochaska & Velicer, 1997).

According to the TTM, Susan is in the contemplation stage of change--having thoughts about changing but not yet acting. Susan recognizes the benefits of PA, such as stress relief and health improvement, but struggles with barriers like lack of time, motivation, and a sedentary work environment. She is currently struggling with decisional balance, where she recognizes the benefits of working out regularly but still perceives her barriers as too limiting. Susan needs to reframe her barriers by emphasizing the positive effects of PA even in limited time frames. Short exercises at lunch, before, and after work, are easy ways to increase activity. Continuing these exercises, Susan can add incremental goals to boost motivation and make progress that aligns with her lifestyle. Setting these goals for her PA will help Susan enhance her self-confidence and satisfaction (Moran, 2004). Incorporating behavioural strategies like self-talk, deep breathing, and meditation can also support her efforts by managing stress and making PA a more enjoyable experience. Research shows that individuals with higher mindfulness scores are more likely to engage in healthy behaviors and report better overall physical and mental well-being

(Roychowdhury, 2021). Concentrating on the positive mental and health benefits will decrease stress and depression through a sense of accomplishment. As Susan's inactivity is making her feel depressed, this is important to note. Including any level of PA can prevent further depression (Mammen & Faulkner, 2003). The Transtheoretical Model (TTM) highlights that enjoyment is a crucial factor for physical activity and maintenance. Activities which align with personal interests increase intrinsic motivation, making it easier to sustain regular physical activity. Research emphasizes that by incorporating enjoyable activities like soccer, hiking, or family games, one is more likely to perceive PA as fun rather than a chore (Marcus & Forsyth, 2010).

Participating in a women's soccer league or transforming her walks into family hikes will allow Susan to blend PA with social interaction and personal satisfaction, helping maintain long-term consistency and push her from contemplation towards action and maintenance phases. There is a large association between socially supportive lifestyles, enjoyment, and stronger intentions to continue PA (Teixeira et al., 2022). Encouragement from the women's soccer league and sharing similar goals with her husband and sister--a fitness instructor--she has two social support groups which gives her the opportunity to receive companionship and emotional support (from her family), as well as informational, instrumental, and validation social support (from her soccer team) (Blalock et al., 2002). Group cohesion among the soccer team will increase, leading to greater adherence which will increase the intention to return (Spink et al., 2015). Role modelling and encouragement from her sister and husband can serve as motivators, helping her overcome initial inertia and plan manageable PA routines, such as short, family-friendly workouts, games with the kids, turning family walks into hikes etc., to transition into the Action stage. The more she can transition her regular enjoyable tasks into activities where she must be active, the easier it will be to maintain long term.

As Susan moves from the contemplation to the action stage, the positives of exercise become increasingly important. (Gorely & Bruce, 2000). This increases Susan's self-efficacy to continue with her PA routine as both her perceived benefits and the belief in herself to achieve her goals. At this stage, it is important to discuss possible setbacks and help Susan establish coping strategies to deal with challenges. This includes planning for busy periods, recognizing triggers that lead to inactivity, and setting flexible goals. Having a plan to cope with possible stressful times is an effective way for Susan to make progress on her personal goals (Carraro & Goudrea, 2013). As Susan progresses to the action stage, it's important for her to incorporate mental health benefits of physical activity, especially when she may feel low energy or stressed. Research shows that being overly inactive can significantly worsen one's mood and increase their stress levels (Ellingson et al., 2018). Incorporating active recovery days, such as stretching or leisurely walks, is key to maintaining a sustainable activity routine and avoiding the relapse stage. As Susan heads towards maintenance, she may feel fatigued at times or feel that certain activities are intense if she's not taking proper precautions to integrate rest and recovery. By incorporating proper rest days, Susan will avoid burnout - which sends most people into the relapse phase. She can use those days as gradual progression to ease into more intense activities, and she will have increased motivation by keeping her routine sustainable and enjoyable.

Recommendations to the Client

1. Schedule short, 10–15-minute activity sessions that fit into your busy schedule, such as brisk walks during lunch breaks or quick home workouts before or after work. Find opportunities to be active throughout the day: taking the stairs, parking further, quick stretches during work breaks, etc.

2. Involve your sister and husband in your PA plan, such as planning joint workouts or walks together.
3. Set achievable, incremental goals like increasing your steps by x each week or adding an extra 5 minutes to her walk.
4. Focus on activities you enjoy. This can be playing soccer in an over 30 women's league or turning her weekly walks into hikes with the family. Games like tag, double Dutch, and freeze dance are a great way to include a cardio workout with spending time with your kids.
5. Reflect on how inactivity affects your mood and stress levels. Identify alternative actions for when you feel low, like taking a 5-minute walk or doing a light stretch.
6. Practice mindfulness techniques: positive self-talk, visualization of you being active, energetic. Focus on the mental and emotional benefits you feel after exercising.
7. Try to induce active recovery days to stay engaged such as stretching, or leisurely walks to keep her body moving while allowing for rest to avoid burn outs and maintain the momentum.

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New Physical Activity (PA) Coaching Client Intake Form (*all information is self-reported*)

Name:	Maria Martinez
Age:	20
Self-reported gender:	Female
Cultural background:	Mexican. She immigrated from Mexico to Ottawa in her last year of high school because her mom had a job opportunity.
Past PA involvement /experiences:	She played low-level/recreational soccer when she was younger but has not been consistently active for the last 5 years. She now runs occasionally but has no consistent workout routine.
Self-reported barriers to PA:	She feels she does not have time to exercise, as balancing her academics, a job, and well-being has been challenging. Running is her preferred form of movement, however, she does not enjoy running alone. She worries about what others think of her body and how she looks while exercising. She has planned gym workouts she would like to do but is anxious about participating in a busy school gym environment, dominated by men.
Motivating factors for PA:	She has a friend who joined a run club and is enjoying her experience. She knows that exercise will help her mental and physical health, and she wants to begin using workouts as a healthy outlet to relieve her stress.

Social influences:	She follows an influencer into running and shares ways to balance her education and well-being, inspiring her. Her one close friend has started going to a run club and says she should come try it sometime.
Current PA involvement:	She walks rather than always taking the bus. She goes for an occasional run every few weeks.
PA goal(s):	To integrate regular PA into her schedule / make it a routine. To reduce her exercise-related anxiety and her feelings of stress in her everyday life. Develop a sense of community through PA.

Selected theory or model of behaviour change: Transtheoretical Model [TTM]

Content integrated from selected course lectures (at least 3): Stress and coping in sport and exercise; Anxiety in sport and exercise; PA and mental health; Social influence on exercise

Evidence-Based Plan to Increase Client's Physical Activity Motivation and Behaviour

The transtheoretical model (TTM) outlines a series of stages individuals typically go through when modifying behaviour. The model comprises five main stages: (1) pre-contemplation, when individuals are not yet considering change, (2) contemplation, when they begin to consider change and the benefits of this behaviour but haven't taken any steps toward action, (3) preparation, when they start to make plans but have yet to take action, (4) action, when they actively engage in the behaviour and adopt new habits, (5) maintenance and relapse prevention when they sustain their exercise routine for six months or more and are working to prevent relapse (i.e., returning to old behaviours) (Prochaska & Velivcer, 1997). Regarding exercise adherence, the TTM helps identify which stage someone is in and tailor strategies to support them at each stage. Cognitive strategies, such as increasing knowledge, and comprehending risks and benefits, are typically utilized in the earlier stages. Behavioral processes of change are used in the later stages of the model. With the assistance of the TTM model, an evidence-based plan will be used to increase Maria's motivation and behaviour toward physical activity (PA). As stated in Maria's intake form, she wants to incorporate regular exercise into her routine. She recognizes the benefits of exercising and has taken steps such as planning workouts to become more active, however, she has not yet taken action. According to the TTM, Maria is at the preparation stage.

Maria's anxiety presents as a barrier to her PA habits. She suffers from social physique anxiety which is a specific subtype of anxiety characterized by one's fear of receiving negative evaluations about their body from others (Zartaloudi et al., 2023). This anxiety can be exacerbated during exercise, especially when wearing more revealing clothing, often leading individuals to avoid exercise altogether to escape potential judgment (Bevan et al., 2021). Given

that Maria is currently in the preparation stage of the TTM, a targeted strategy to help her progress to the action stage is to suggest that she find an outfit in which she is comfortable working out. Suggesting that she attend the women's-only gym time offered at the campus gym, which is covered in her tuition, will also help her progress. This will help develop an ideal environment where Maria feels safe to exercise, reduce her social physique anxiety and improve her motivation and behaviour towards physical activity.

Furthermore, Maria can practice positive self-talk to improve her self-efficacy and reduce her anxiety. As mentioned by Gammage et al., positive self-talk is an important tool for encouraging individuals to exercise as it helps with motivation and influences behaviour (2001). This strategy will help Maria develop strong PA habits, which will help her reach the maintenance stage and avoid relapse.

Maria's participation in regular PA will also help her reduce the stress in her everyday life. As stated by Wedekind et al., PA is a beneficial method of treating anxiety disorders (2010). According to the endorphin hypothesis, exercise induces a euphoric feeling; also known as runner's high (Mikkelsen et al., 2017). Maria will grow to love the feeling she gets from completing a walk, run, or workout, as moderate levels of exercise intensity are associated with mood-boosting effects. Running 2-3 times a week has comparable results to antidepressants for treating anxiety disorders, with additional advantages for overall physical health (Verhoeven et al., 2023).

Maria wants to incorporate regular exercise into her routine. However, the thought of running or going to the gym seems like a burden to add to her already busy schedule. A practical way for Maria to transition to the action stage is to start running with her friend, providing

comfort and enjoyment, and making exercise less daunting. This will also help Maria develop a PA community and increase her accountability to exercise.

Maria also suffers from self-doubt, which acts as a barrier to her engagement with PA. To overcome this barrier, she can start with less intimidating activities, like a walk or a run, to gradually build confidence before progressing to more challenging exercises or going to the gym. Focusing on small, consistent improvements rather than aiming for perfection or comparing herself to others at the gym will help her develop a positive mindset and set realistic expectations. For her social concerns, particularly feeling uncomfortable in a male-dominated gym environment, she can explore women's-only gym times at the campus gym, providing a more comfortable setting.

Finally, given Maria's demanding university schedule, time management poses a significant barrier. To increase the regularity of her PA sessions and simultaneously reduce her anxiety, Maria can begin with short, manageable sessions. Integrating relaxation techniques, such as deep breathing or stretching, will help alleviate tension and promote mental well-being (Jerath et al., 2015). Prioritizing brief yet consistent sessions in the morning or during her study breaks will make PA more accessible. By focusing on consistency over duration, Maria can integrate exercise into her routine without feeling overwhelmed, and manage her time and stress more effectively.

Altogether, finding an outfit in which she is comfortable to work out, using her available resources such as the women's-only gym, and practicing positive self-talk are strategies that will help Maria achieve her PA goals. These strategies will develop an ideal environment where Maria feels safe to exercise, reduce her social physique anxiety and improve her motivation and behaviour towards physical activity.

Recommendations to the Client

1. Schedule your workouts at the start of each week. Each Sunday you can organize your calendar to ensure you make time and plan for your workouts. This will increase your consistency of physical activity, ensuring you make time for it.
2. Go for regular walks or runs to gradually build your confidence before progressing to more challenging exercises or going to the gym. Since you enjoy running the most, you can prioritize that and opt for other activities when you feel comfortable.
3. Reach out to your friend and join her at the run club. This will make running a fun activity that you will look forward to for social time with your friends rather than working out alone.
4. Practice positive self-talk and mindfulness when you are exercising and in everyday life. This will increase your self-esteem and help you enjoy exercise by feeling good about yourself and your abilities.
5. Find an outfit you are comfortable working out in to boost your confidence. When you feel good about how you present yourself, this will also positively impact your physical activity performance.
6. Use your available resources. The school gym is included in your tuition and offers a women's-only gym time that can help you avoid the busy, male-dominated school gym environment.

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New Physical Activity (PA) Coaching Client Intake Form (*all information is self-reported*)

Name:	William Knott
Age:	25
Self-reported gender:	Male
Cultural background:	Indigenous
Past PA involvement /experiences:	Will grew up playing hockey in the winter and baseball in the summer. He also enjoys taking part in cultural dancing. He is still involved with a recreational hockey league about once a year, but baseball is inaccessible due to a shoulder injury.
Self-reported barriers to PA:	A shoulder injury leaves him feeling like he is unable to get back to where he was without risking reinjury, which is further reinforced by quick fatigue with cultural dancing. He also has a perceived lack of free time (8h/day office job) and is intimidated by the cost of equipment and programs.
Motivating factors for PA:	Concern of mental health especially from disconnectivity from his peers because of his ability to participate in cultural dance. He wants to improve his athletic skills and be a part of the hockey team like he once was.
Social influences:	Will's younger brother, Bill, is a competitive athlete and offers encouragement for any type of PA, but wants Will to come to the gym with him. His parents think spending money in any way to

	exercise is wasteful, “you can go exercise outside for free”.
Current PA involvement:	Limited hockey participation (once a year). Baseball is unavailable due to injury, and cultural dancing a few times per year.
PA goal(s):	Get back into physical shape to enjoy cultural dancing, contribute more to the hockey team, and connect to peers. Be consistent with physical activity to increase mental health. Adapt physical activity to align with injury and lifestyle.

Selected theory or model of behaviour change: Transtheoretical Model [TTM]

Content integrated from selected course lectures (at least 3): Social Influences on Exercise; Physical Activity and Mental Health; Self-esteem, Self-concept, and Exercise

Evidence-Based Plan to Increase Client's Physical Activity Motivation and Behaviour

The transtheoretical model (TTM) is an approach to behaviour initiation and change that proposes individuals transition through a sequence of stages. Moving through the distinct stages is not always linear; people can start, stop, or relapse at different levels. The five stages of TTM are first, the precontemplation stage where there is no intention to change or they may not be aware of a need, second, the contemplation stage where an individual is considering change, third, the preparation stage where an individual is planning to make a behaviour change, fourth, the action stage where an individual implements change and finally fifth, the maintenance stage where the behaviour is sustained (Prochaska & Velicer, 1997). Movement through stages will depend on individuals' assessment of gains and losses (decisional balance), situation-specific confidence (self-efficacy) and cognitive/behavioural strategies (processes of change). To achieve Will's goals and increase his physical activity we will employ strategies to aid his progression through the stages of the transtheoretical model. Will participates in limited physical activity (PA) and identifies his desire to increase his PA with no clear preparation yet, this will put him in the contemplation stage of the TTM. Will's failure to move through the stages are likely due to his low self-efficacy caused by his shoulder injury and decreased fitness compared to his youth. His injury, work environment and financial barriers also contribute to his decisional balance. We will use different strategies to increase his self-efficacy and adjust his decisional balance to favour the benefits of exercise by educating him and providing adaptations for his injury.

Will has identified different sources of social support. We will focus on his emotional support from his brother, encouraging him to engage in physical activity with his brother (companionship support) and prompting him to ask his brother for advice as an elite-level athlete (informational support). The positive social support from his brother has been constructively

correlated with moving through the stages of the transtheoretical model and positive behaviours of change (Wagner et al., 2004). At the same time, we must address the concern of financial barriers from his parents. We will be able to recommend low-cost options to start while also educating him on how the benefits of PA can outweigh the costs. Increasing Will's social support from his parents and brother will help to increase his self-efficacy and decisional balance (Peterson et al., 2013). Will values his connection with peers as well. We will focus on expanding Will's social support network by encouraging him to seek support from others outside his family. Building these trusting relationships is a process of change, and interacting with teammates, fellow cultural dancers, and work colleagues will result in a larger support network which is associated with an increase in PA (Du & Li, 2022).

Will has been increasingly concerned about his mental health associated with the disconnect he feels with his peers via cultural dance and hockey. Will's office job and prolonged periods of sedentary time are likely linked to a decline in mental health (Ellingson et al., 2018). We will focus on improving Will's mental health by educating him on the benefits of PA and how increasing his PA can also support his socialization goals. This will help shift his decisional balance to initiate the preparation stage. Once in the action stage, we will also make it clear to Will that as self-efficacy increases through practice, a decrease in symptoms of depression, anxiety or social isolation has been shown to follow (Tahmassian & Jalali Moghadam, 2011). Since Will was previously an athlete he appears to maintain that belief and compare himself to the past which is negatively impacting his self-esteem. PA remains an important part of his identity and he may still consider himself an exerciser. But as a result, this causes him to have low self-efficacy as his PA skills aren't at their previous level. Increasing Will's self-esteem and self-efficacy will be crucial in increasing his PA. Limiting comparison to past performance and

focusing on current accomplishments will help Will's self-efficacy/mastery view of his abilities. This will help him move through the action to the maintenance stage.

To address Will's shoulder injury, we will need to know more about the injury history, including his treatment plan, rehabilitation and any recommendations from a physician. His fear of reinjury is a concern for his decisional balance and self-efficacy, likely stunting his movement through the stages of the TTM. Moving into the Action Stage of the TTM, a prevention program can help reduce the chance of re-injury and reduce the perceived cost of being physically active. This might be accomplished by: Strengthening exercises to stabilize the shoulder joint and surrounding muscles, Mobility work to improve range of motion and reduce compensatory movements, and Education regarding safe movement patterns and activity modifications. Injury prevention programs help progress individuals into the action stage by addressing psychological and physical barriers. Addressing factors like injury concerns and readiness is crucial for adherence, minimizing risks, and sustaining long-term behaviour change (Andersson et al., 2017). In Will's self-reported barriers, he also expresses issues of perceived lack of free time. He works eight hours per day and finds it hard to include physical activity in his regular schedule. Time management skills are critical in reaching Will's goals. It will make his day easier and more achievable if he has time set aside to do certain activities. According to a study done by Health Education Research, improvements in time management have been proven to show an increase in physical activity and self-efficacy (Williams et al., 2011). Therefore improving Will's use of time will not only improve his level of physical activity but also make it easier to achieve his goals. This would follow the preparation/action stage in the TTM as he's preparing for change and adopting a new habit to achieve his goals.

Recommendations to the Client

1. Consider reaching out to your brother Bill for words of encouragement or any advice you may need from an elite athlete. Invite him to begin exercising with you however you may begin (ex. Walking, fitness class, hockey, cultural dance etc...)
2. Visit a registered physiotherapist or registered athletic therapist for an athlete-specific preventative workout program. This may include strengthening muscles around the shoulder, increasing mobility and reducing compensatory movements for the shoulder during your return to physical activity.
3. Consider reaching out to teammates for tips on time management to better balance work and physical activity. This can help you with feeling less overwhelmed and more in control of your schedule.
4. Reflect on past positive mental health experiences during physical activity and the social support you had. Use that as a reference to the benefits of physical activity and as a motivational factor to achieve your goals.
5. Stay focused on the present, don't compare yourself to your past self and past capabilities. Keep working towards your current goals and track your progress, appreciate new accomplishments.
6. Review low-cost gym memberships and physical activity alternatives that still provide the necessary means to achieve your goals (ie. Walking, Hiking or Biking).

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New Physical Activity (PA) Coaching Client Intake Form (*all information is self-reported*)

Name:	Ali McLovin
Age:	27
Self-reported gender:	Female
Cultural background:	Canadian
Past PA involvement /experiences:	- University cheerleader in the past, she suffers from body image issues due to that. - Is used to working out in groups having been part of a team for her whole athletic career. - Used to be really active until she got caught up with adult life, children and work.
Self-reported barriers to PA:	- New mom of 2 (busy, feels she does not have any time) - Postpartum struggles (depression/anxiety) - Body image issues - Anxiety about leaving her kids alone - Low self-efficacy (does not believe she can attain the same body)
Motivating factors for PA:	- Wants to keep up with her active toddler - Body issues, wants to get back in shape (get back to pre-baby body)
Social influences:	- Societal pressure on body (to get back to pre-baby weight quickly) - Not a good mom because she can't move properly to keep up with her children

	- Societal standards about body image
Current PA involvement:	- Not active - Engages in small amount of play with toddler and baby
PA goal(s):	- Get her weight down - Get in shape to keep up with her toddler

Selected theory or model of behaviour change: Transtheoretical Model [TTM]

Content integrated from selected course lectures (at least 3): Stress, emotion, and coping in sport and exercise; Social influences on exercise; Body image in sport and exercise

Evidence-Based Plan to Increase Client's Physical Activity Motivation and Behaviour

The following physical activity plan is based on the Transtheoretical Model (TTM). The TTM was created by Prochaska and DiClemente in 1979. It is grounded in the theory that change happens in five stages, and that individuals can cycle through these stages over time. It encompasses the following three major psychological constructs: firstly, self-efficacy, which is the belief in one's abilities to execute or produce a given objective. Secondly, the TTM uses decision balance to weigh the potential gains and losses of the behavioural change. The last major part of the TTM is the process of change, which refers to the cognitive and behavioural strategies used throughout the stages of change. The model aids to explain how individuals adopt physical activity into their lifestyle with the following five stages. Precontemplation; when the individual is not thinking about changing the behaviour. Contemplation; the individual is thinking about changing the behaviour but not ready to act. Preparation; the individual is actively planning to take action. Action; the individual is engaging in the desired behaviour. Maintenance; the behaviour has been adopted into the individual's lifestyle. Based on Ali's intake form it has been determined that she is in the preparation stage, consequently she will be given a tailored physical activity plan that will cater to her individual needs and aid her in reaching her goal.

Ali is subjected to pressure from her environment. Growing up in a sport where her body was often the center of attention, she has always been conscious of her physical appearance and feels the need to maintain control over how she looks in order to feel her best. Now, as a mother of two, she feels pressure both from herself and from those around her to return to her pre-pregnancy body as quickly as possible. Her identity has always been closely tied to her physical appearance and to her athletic physique, so the expectations she and others have for her body are different from the reality of what she looks like now. On top of this, she often hears from people

about the benefits of exercise postpartum for mental and physical health, which only adds to the pressure to get back in shape.

Women's participation in sports is closely impacted by their social circle. Although having support from family and friends is shown to encourage physical activity, when this support becomes excessive pressure and monitoring of exercise, stress is added on the person which can lead to decreased participation in physical activity (Coleman et al., 2007). As opposed to men, women seem to benefit more from focusing on health and wellness outcomes of physical activity rather than on competition and perception of others (Edwards & Sackett, 2016). Ali would benefit from surrounding herself with people that support her health journey rather than pressure her to get back her past body.

The participation in physical activity is also highly affected by one's own perception of their body. A negative body image is often linked to disengagement from physical activity, which in turn can further worsen body image (Mosur-Kaluza & Guskowska, 2015). Women with a negative view of their body will be less likely to participate in physical activities placed in social settings, which reduces the range of activities available to them. As stated above, it is important that they participate in activities that put a focus on the health benefits of the activity rather than on the aesthetic outcomes. The social and body image influences on exercise are closely related, and both need to be addressed similarly; Ali needs to place the focus on the health benefits of exercise over its aesthetic outcomes, and she needs to surround herself with people who encourage this approach.

Ali had a very stressful and anxiety-inducing past couple of years after having her second child and losing track of her active background in competitive university cheerleading. To get back into a similar physical and mental state that she had before graduating from university and

to get over the mental block, she will need to plan out all of the steps carefully and then continue to ease into the plan slowly to ensure she is comfortable. Ali struggles with low self-efficacy so starting by setting small, achievable physical activity goals is important to ensure they feel manageable and achievable for her. She will be encouraged to gradually increase the duration and intensity of these activities as confidence builds and celebrating each step, no matter how small, will reinforce positive behaviour and increase motivation. Ali has gotten very attached to her children and does not want to leave them, even for short periods. She will incorporate physical activity opportunities that allow her to stay close to her children. For instance, including the children in some exercises will allow for the reassurance of being with them while still meeting her goals. Later on, if childcare is available, encourage her to start with short gym sessions or classes and gradually increase her comfort level. Engaging in physical activity with a friend or family member can also help reduce feelings of isolation and increase confidence in leaving the children.

Recommendations to the Client

1. Instead of focusing on how your body looks, try to shift your attention on the health benefits of physical activity. Paying attention to how you feel after each workout (mood, energy level, anxiety level, etc) will give you instant rewards that will keep you motivated, as opposed to focusing on your looks which will not change overnight.
2. Surround yourself with people that support your health goals and that don't comment on your body. Your social circle has a big impact on the way you approach physical activity and exercise. You should surround yourself with people that make you feel empowered, not discouraged.

3. Find physical activities that allow you to stay close to your children so you don't feel like you have to choose between them and physical activity. This can look like outdoor walks with them, at-home yoga, online workouts, etc.
4. When you feel more comfortable with exercise, gradually implement short gym sessions into your routine. You can try to find a gym that has built-in daycare. The gradual addition of gym sessions will give you time to gain confidence in the gym and in being away from your children. As you start being more secure, progressively increase the length of the sessions and the number of times you go to the gym each week.
5. Consider inviting a close friend or family member to join your health and fitness journey. Having someone to do it with you will help with motivation and self-efficiency. It can also reduce anxiety as you have someone to support and encourage you when you're feeling insecure. Since you are used to working out in groups, you might also feel more comfortable keeping these habits.

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New Physical Activity (PA) Coaching Client Intake Form (*all information is self-reported*)

Name:	Alan Garner
Age:	37
Self-reported gender:	Male
Cultural background:	White Canadian
Past PA involvement /experiences:	He was moderately active during his younger years, participating in sports such as basketball and track & field in high school. However, in his late twenties, he became less active due to work demands and social commitments. His experiences with PA have been positive when he participated in group activities, but he often felt discouraged when exercising alone.
Self-reported barriers to PA:	Due to a demanding job as a lawyer and family commitments (raising two young kids), Alan feels he has little time to exercise, and when he does, he reports feeling tired and overwhelmed after a long day of work. Alan worries that he won't be able to keep up with a workout routine, especially because he hasn't been consistent with exercise in recent years due to lack of motivation. Whenever Alan is active, he prefers being in a group setting, but tends to worry that he will be judged on his appearance. He feels that starting an exercise routine from scratch will be too difficult and time-consuming because he does not have the resources.

Motivating factors for PA:	Alan has a family history of heart disease and obesity, which motivated him to take action for his long-term health. He would also like to improve his body image and lose weight to improve his self-esteem. Alan has two kids, aged 7 and 8, and would like to improve his fitness so that he can spend time and create long-lasting memories with them.
Social influences:	His major social influences are other dads on his kids' softball team, as they all seem to be in amazing shape. His coworkers, friends, partner, and family encourage him to be physically active for his health.
Current PA involvement:	His PA involves walking to work on days with beautiful weather, taking care of his two kids, the occasional golfing session with his friends, and the beer league slow-pitch softball team every summer.
PA goal(s):	Alan aims to lose 20 lbs and increase his overall PA levels. He wants to gain the confidence to be active on his own, as well as with others.

Selected theory or model of behaviour change: Theory of Planned Behaviour [TPB]

Content integrated from selected course lectures (at least 3): Self-esteem, self-concept, and exercise; Group cohesion in sport and exercise; Social influences on exercise; Body image in sport and exercise

Evidence-Based Plan to Increase Client's Physical Activity Motivation and Behaviour

The Theory of Planned Behaviour (TPB) is a model of behaviour change used to understand and predict human behaviour. It suggests that the most immediate predictor of behaviour is an individual's intention to complete the behaviour (Ajzen, 1991). An intention is shaped by three main factors: (1) an individual's attitude toward the behaviour (i.e., positive or negative evaluation of performing a behaviour), (2) subjective norms (i.e., perceived social pressure to perform or not to perform the behaviour), and (3) perceived behavioural control (i.e., one's belief of their ability to carry out a behaviour) (Ajzen, 1991). When these three factors are fulfilled, intentions are stronger, making the actual behaviour more likely (Ajzen, 1991). We are looking to influence Alan's physical activity (PA) by enhancing his intentions to exercise.

Alan does not view himself as an exerciser; however, he understands the importance of PA, fitting him in a nonexerciser schema of self-worth. One of our main objectives for Alan would be to shift his cognitive schema towards an exerciser's schematic so that he views himself as an exerciser, making him view his self-worth more positively (Kendzierski, 1994). In the TPB, attitudes are influenced by behavioral beliefs, which reflect the expected positive or negative outcomes associated with performing a particular behavior (Ajzen, 1991). Alan's attitude toward PA is negative; he fears being judged for his appearance in group settings and doubts his ability to maintain an effective workout regimen due to past failed attempts. Focusing on reshaping his beliefs about the benefits of PA and addressing perceived barriers is crucial. Alan reported concerns of being judged by others regarding his physical appearance [his social physique anxiety] (Hart et al. 1989). We can encourage him to wear clothes that make him feel comfortable and confident to reduce feelings of low self-esteem. To address Alan's unenthusiastic views of PA, he can shift his focus from external motivators (i.e., body image and

health) to intrinsic motivators (i.e., enjoyment). If Alan thinks more intrinsically regarding his motivation to be physically active, PA could become a source of joy, personal growth, and excitement, rather than associating it with disgust or fear (Teixeira et al., 2012). Research emphasizes that individuals can improve their attitudes toward PA by increasing their knowledge of its benefits, alongside the risks of physical inactivity (Fredriksson et al., 2018). Thus, Alan can strengthen his intention to engage in PA by reflecting on his family history of heart disease and obesity linked to inactivity and framing exercise as a stress-management tool. Emphasizing that PA can serve as a means to bond with his children and align them with the active, fit role models among the dads he admires may also boost his motivation.

Shaped by the significant people in one's life, the TBP explains that subjective norms represent the pressure one perceives to engage in/avoid a particular behaviour (Ajzen, 1991). Alan receives encouragement from his friends and family to be physically active, and his friends invite him to join their workout sessions. Therefore, Alan's supportive environment could positively influence his intention to engage in PA. It could also be beneficial for Alan to find a group of people with similar PA levels and a similar body image, as Patterson et al. (2022) suggest that it could increase motivation. Alan must reflect on his sources of social support as they will substantially impact his incentive to participate in PA.

Lastly, the TPB suggests that perceived behavioural control is shaped by an individual's belief in their ability to perform a behaviour, influenced by both internal and external factors (Ajzen, 1991). Alan is facing multiple barriers that negatively impact his PA. His busy work schedule and commitment to two young kids (both active in sports) make starting an exercise routine seem time-consuming. These types of barriers may foster an environment where people, like Alan, feel overwhelmed, leading them to become avoidant. To help Alan overcome these

obstacles, it is essential to address his internal and external constraints while establishing better self-efficacy. We can encourage Alan to incorporate physical activities into his work days, such as taking the stairs instead of the elevator or walking during his lunch break, to capitalize on his time and reduce potential feelings of panic when he returns home. Alan could also engage in different forms of social exercise, like working out with some of the dads from his kids' team and purchasing a gym membership to reduce resource-related restraints. Obstacles and resource limitations are significant in shaping perceptions of control, which, in turn, influences both intention and behavior (Conner & Armitage, 1998). To further increase his sense of self-efficacy, Alan should set small, attainable goals that he can monitor to observe his progress. Given his athletic background, Alan may find that he will progress quicker than anticipated; this could boost his self-esteem and motivation even more. As he sees himself achieving milestones, his current barriers will diminish, allowing him to find the time and motivation for regular PA.

Recommendations to the Client

1. Remind yourself of the benefits of exercise, such as reducing stress, improving your mood, and supporting your long-term health. Keep in mind how good you'll feel afterward to stay motivated.
2. Start with realistic goals, like 20 minutes of movement each day, and gradually increase your time or intensity. Taking small steps can encourage you to continue.
3. Involve your support network by asking a friend or family member to join you for a walk or trying a group class together. Feeling supported makes it easier to stick with your PA routine.
4. Explore different types of PA to find what you enjoy most. The more you enjoy it, the more positive your attitude will be towards exercise, making it easier to stay motivated.

5. Wear workout clothes that make you feel comfortable and confident. Choosing the right attire can help you focus on the activity rather than worrying about your appearance.
6. Look for opportunities to be active throughout the busy work days, such as taking the stairs instead of the elevator or going for a walk during lunch breaks. Little changes like these can add up over time.

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New Physical Activity (PA) Coaching Client Intake Form (*all information is self-reported*)

Name:	Samantha Gomez
Age:	16
Self-reported gender:	Female
Cultural background:	Canadian with a Hispanic background
Past PA involvement /experiences:	Participated in some school sports, including volleyball and soccer, between the ages of 10 and 14. During this time, she developed a foundational understanding of sportsmanship and teamwork. However, she has not engaged in regular sports participation for the past two years due to other priorities and responsibilities (e.g., school) and decreased motivation. Occasionally tries to maintain some activity by going to the gym but her participation is inconsistent and largely depends on her friends availability to go to the gym with her.
Self-reported barriers to PA:	She lacks time due to school commitments and limited access to transportation to sports facilities. Also, she has a fear of triggering her asthma symptoms during exercise. Struggles with low self-esteem and perceived ability due to social influences, which affects her motivation to go to the gym.
Motivating factors for PA:	She has a desire to increase her cardiovascular health to better manage her asthma and stamina. She wants to improve her self and physical

	image to become more confident as a teenager. She also wants to use PA to help feel connected and supported by her family and friends.
Social influences:	Her friends and family are her main social influences, they are all physically active and are supportive towards her becoming more active. Social media also influences her body image and shapes her attitudes towards PA since she often compares herself to others.
Current PA involvement:	She walks to school and is taking a gym class, occasionally goes to the gym, however she relies on going with friends rather than going independently.
PA goal(s):	Her goals are to create a fitness routine that allows her to engage in PA four times a week while aligning the plan with her busy schedule. She also wants to lose 30 lbs to increase her confidence in her appearance.

Selected theory or model of behaviour change: Theory of Planned Behaviour [TPB]

Content integrated from selected course lectures (at least 3): Group cohesion in sport and exercise; Social influences on exercise; Body image in sport and exercise; Self-esteem, self-concept and exercise, Motivation and behaviour change

Evidence-Based Plan to Increase Client's Physical Activity Motivation and Behaviour

The Theory of Planned Behaviour (TPB) demonstrates how strongly linked intention is to behaviour outcome, based on the notion that individuals have control over their behaviour (Ajzen, 1991). The greater the intention to do something, the more likely it will be performed. There are three factors that influence a person's behaviour all through intention. The first factor that influences a person's behaviour is one's attitude towards the behaviour, which is influenced by feelings from past events and observations, whether they are positive or negative. The second factor that influences a person's behaviour is the subjective norms. This refers to how people perceive the actions of others around them towards a behaviour. The third and final factor that influences behaviour is perceived behavioural control. This is how much we think we can control our own behaviour. This depends on internal barriers such as determination and ability, and environmental barriers such as resources and the support available (Ajzen, 1991).

Samantha's physical activity (PA) behavior is influenced by multiple factors that both facilitate and hinder her participation, categorised under attitudes toward behaviour, subjective norms, perceived behavioural control, and behavioural intentions. Samantha has a positive attitude toward improving her PA, as she is motivated by a desire to enhance her cardiovascular health and boost her self-image and confidence. However, her perceived behavioural control is hindered by her limited transportation access, a demanding school schedule, asthma, and a history of an eating disorder may reduce her sense of control over her ability to engage in PA consistently, undermining her motivation. Social influences also play a critical role in shaping her behaviour. Her friends and family serve as a supportive network, with her friends joining her at the gym and walking to school reinforcing her PA. We aim to overcome Samantha's negative attitudes about PA thus enhancing her intention to perform PA (Ajzen, 1991).

Attitude is the primary factor of the TPB that affects Samantha's underlying motivation and behaviours. For example, Samantha's unhealthy eating habits stem from her eating disorder, which was caused by obesity. A questionnaire can be provided to gauge a deeper understanding of her attitudes towards food. Depending on the severity, she may be referred to a psychologist where they can provide cognitive behavioural therapy to improve her self-concept and reduce her unhealthy eating behaviour (Dalle Grave et al. 2021). Additionally, Samantha is very self-conscious of her appearance, and when she is at the gym, she worries she is being judged by others for not having an athletic physique. Her attitudes can be improved by educating her about the advantages of PA rather than emphasising its aesthetic appeal. Educating her that PA can improve her ability to handle academic stressors and increase her memory and attention (Alghadir et al. 2020). Consequently, knowledge about the benefits can contribute positively to one's attitudes towards PA in developing healthy habits.

The norms of PA can be varied as there are several factors that can influence behaviour, such as media and family. Samantha feels the pressure to meet societal expectations being a teenage girl. To prevent the pressure that comes with comparison from social media, Samantha can focus on the positive uses of social media. Social media has increasing influences for individuals to learn and participate in groups about PA interventions (Goodyear et al. 2021). For example, there are many resources for PA, whether it be blogs, tutorials, or videos. Social media can encourage her to see PA as a way to connect with her family and acquire their support. Her fitness groups will remain open as a support system under the plan, and she may even invite close friends or family to help her feel more motivated and less anxious about PA. Nonetheless, participation in PA is associated with better self-esteem and support systems (Monteiro et al. 2021). However, Samantha should take note of her personal goals and be intrinsically motivated

to stay active. Over time, as she becomes more comfortable, the plan will adapt for her to visit the gym independently in order to improve her confidence and strengthen her commitment to achieving her goals.

Samantha faces multiple perceived barriers that will affect her perceived behavioral control, including asthma, obesity, lack of transportation, and time constraints (Mancuso et al. 2009). To combat these barriers, the coaching plan will begin with low-impact activities that Samantha can easily handle to alleviate her concerns about her asthma and obesity. This will enhance her self-esteem and reduce her fear of symptoms caused by exercise. The plan also involves incorporating exercises she could do with her family members or friends. Having emotional support from their social network, which includes encouraging and following others, makes it easier to stay active (Mancuso et al. 2009). This will increase her perceived behavioural control by improving her self-efficacy to believe she can perform the task. Samantha's perceived behavioural control is further influenced by her belief that she does not have enough time to exercise due to her busy social routine and academic demands. To address these concerns, we will implement virtual at-home group workouts that fit into her schedule and do not require access to a gym. Lastly, we aim to increase Samantha's behavioural intentions by establishing flexible, attainable goals that work with her demanding schedule. According to research, teenagers who set clear and attainable goals, especially ones that are specific, measurable, realistic, relevant, and time-bound (SMART), are more likely to maintain their fitness routines (Martin et al. 2018). Samantha is more likely to stick to her fitness plan and gradually develop it into a sustainable habit if she breaks her goals down into small checkpoints and aligns them with her interests and free time. Finally, we will use positive reinforcements such as celebrating her small wins to enhance her drive, confidence, and perceived behavioural control.

Recommendations to the Client

1. Enhance your positive attitudes toward physical activity. This can be done by reading the benefits of physical activity and focusing on enjoyable and rewarding activities that align with your interests and goals. Know that any form of physical activity will be beneficial to your health and confidence.
2. Encouraging your friends and family to remain active alongside you will strengthen your confidence and create an encouraging and supportive environment that will reinforce you to be physically active.
3. Recommendation for journaling to achieve your physical activity goals. Journaling can be a powerful tool to help you stay motivated and focused on your fitness goals (short and long term) as well as progress made. You can reflect on past accomplishments to acknowledge the progress you made in your fitness journey to increase your self-esteem.
4. Eliminating practical barriers, like finding convenient workout opportunities that align within your busy schedule and effectively managing your asthma, can empower you to feel more in control.
5. Fostering a social support system by involving your friends and family consistently can create an encouraging environment that reinforces your physical activity behaviour and motivation over time.
6. Set SMART goals, allowing you to build momentum toward sustained engagement in physical activity. For example, doing cardiovascular exercises such as jogging, cycling, and swimming three times per week. These goals can be adjusted to your level of comfortability as you progress with your health journey.

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