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Motivational Profiles and Their Relation to Coaching Behaviours and Dropout in Swedish Female Ice Hockey

A Latent Profile Analysis

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Motivational rofiles and Their Relation to Coaching Behaviours and Dropout in Swedish Female Ice Hockey: A Latent Profile Analysis

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Abstract

Purpose: The purpose of the present study was to use a person-centered approach to identify latent motivational profiles among female ice hockey players in Sweden, and examine how identified profiles relate to coaching behaviours and dropout.

Methods: Swedish female ice hockey players (N = 140; M_{age} = 21.66, *SD*= 7.50 years of age) answered an online survey that contained questionnaires that measured behavioural regulations in sport, perceived coaching behaviours, and intentions to dropout of ice hockey. The latent motivational profiles were identified using latent profile analysis.

Results: Two latent motivational profiles were identified, an ambiguously motivated profile and a self-determined profile, which mostly differed in terms of amotivation and controlled motivation. Need-thwarting coaching behaviours were associated with an increased likelihood of belonging to the ambiguously motivated profile, which also reported significantly higher intentions of dropping out of ice hockey.

Conclusion: Findings suggest that coaches and organizations who want to decrease dropout in Swedish female ice hockey should aim to promote their players' self-determined motivation and refrain from using need-thwarting behaviours.

Keywords: Female ice hockey, Motivational profile, Coaching behaviour, Dropout, Person-centered

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Sammanfattning

Syfte: Syftet med studien var att med en personcentrerad approach identifiera latenta motivationsprofiler hos svenska damishockeyspelare, och undersöka de identifierade profilernas relation till tränarbeteenden och avhopp.

Metod: Svenska damishockeyspelare (N = 140; $M_{ålder}$ = 21.66, *SD*= 7.50 år) besvarade en webbenkät som innehöll frågeformulär som mätte beteenderegleringar inom idrott, tränarbeteenden och avsikt till avhopp från ishockey. De latenta motivationsprofilerna identifierades med hjälp av en latent profilanalys.

Resultat: Två latenta motivationsprofiler identifierades, en tvetydigt motiverad profil och en självbestämd profil, som mestadels skiljde sig åt vad gäller amotivation och kontrollerad motivation. Behovshämmande tränarbeteedenden associerades med en ökad sannolikhet att tillhöra den tvetydigt motiverade profilen, som också rapporterade signifikant högre avsikter till avhopp.

Slutsatser: Resultaten tyder på att tränare och organisationer som vill minska avhopp i svensk damishockey bör sträva efter att främja sina spelares självbestämmande motivation och avstå från att använda behovshämmande beteenden.

Nyckelord: Damishockey, Motivationsprofil, Tränarbeteende, Avhopp, Personcentrerad

Motivational profiles and Their Relation to Coaching Behaviours and Dropout in Swedish Female Ice Hockey: A Latent Profile Analysis

In Sweden, participation in organized sports tends to decrease with age. According to the Swedish Sports Confederation (2022), about 70% of children between 6 and 12 years old participate in organized sports, while this number drops down to around 60% in adolescence (ages 13 to 18 y.o.), and below 30% in young adults (ages 19 to 25 y.o.). Such a pattern is found within Swedish ice hockey, which is one of the most popular organized sports in Sweden (Swedish Sports Confederation, 2022). According to the latest available data, the total number of licensed players was 70.893 during the 2021/2022 season. Female players only constituted 13% (9.063) of the total number of licensed players (Swedish Ice Hockey Association, 2022). While the number of female players has more than doubled in the last decade, this increase only constitutes 555 new players per year; that is, a yearly increase of 1,7 players per hockey club. Furthermore, the number of licensed female players dropped by 45%, from 3.005 between the ages of 9 to 16 to 1.653 for the 17 y.o. and above in the 2020/2021 season (Swedish Ice Hockey Association, 2021). Thus, there seems to exist two significant challenges for Swedish ice hockey: (1) increasing the number of female players, and (2) decreasing dropout in general.

Dropout in sport

Research has examined sport participation and dropout. For instance, Bailey et al. (2013) found five key factors connected to children and sport participation: perceived competence, fun and enjoyment, learning new skills, parental influence, and influence of friends and peers. Whereas, Crane and Temple's (2015) findings of drop out in children and youth showed that the most critical factors were the following: enjoyment, perceptions of competence, social pressures (from coach, parents and peers), competing priorities, and

physical factors. Interestingly, the main reasons for taking part in sport identified by Bailey et al. (2013) are similar to the factors connected to dropout found by Crane and Temple (2015). Similarly, Perry (2013) found that the main intrapersonal factors regarding dropout in sport and physical activity were perceived competency, lack of enjoyment, competing priorities or change of activity. Interpersonal factors were negative relationships with a coach, lack of social support within the sport or a tense team relationship. Among adults over mid-twenties, some of the most common factors were changing activity, lack of motivation and/or individual coaching support and competing priorities. Jenkin et al. (2021) asked people aged 50+ years why they had dropped out of sport earlier in life, and found that the main reasons were structural constraints (e.g., perceived lack of playing opportunities, competing priorities and lack of social acceptance).

Furthermore, most of the factors above can be linked to factors of Self-Determination Theory (SDT; Ryan & Deci, 2000a, 2017; i.e., autonomy, competence and relatedness). This is in line with findings of Back et al. (2022) who found that factors of SDT were related to team sport dropout. In addition, Back et al. (2022) found that factors of Theory of Planned Behaviour (TPB; Ajzen, 1991) were connected to team sport dropout, as well as social support, technical skills and sport experience. Back et al. (2022) also mention that previous literature has found that more controlled forms of motivation were connected to dropout. However, they did not find support for this in their study, arguing that this might be because motivation "...can be viewed as a multidimensional construct, people might have competing reasons for engaging in specific activities..." (p. 8).

Thus, existing literature supports the notion that factors connected to SDT are linked to participation and dropout. However, there are some contradictory findings regarding the motivational regulations of SDT, suggesting that this is an area worth considering. Finally, females have been largely underrepresented in studies regarding dropout in sport. The review

by Crane and Temple (2015) consisted of 43 studies, most of them cross-sectional, where females only constituted 11% of the 467.996 participants. Back et al.'s (2022) literature review consisted of 12 prospective studies, and although having a slightly higher share of female participants (37%), male participants were still in majority in Back et al. (2022). That is, there is a definite mismatch of studies examining female (as opposite to male) in sport participation and dropout that needs to be addressed.

Self-Determination Theory

SDT (Ryan & Deci, 2000a, 2017) is one of the most influential theories in the field of exercise and sport psychology (Lindahl et al., 2015). In SDT, different qualities of motivation are emphasized instead of quantity, as five motivational regulations are suggested to exist along a continuum ranging from amotivation and extrinsic motivation, to more intrinsic motivation (i.e., none, external, introjected, identified, integrated and internal; Vansteenkiste et al., 2010). As mentioned, amotivation, extrinsic motivation and intrinsic motivation are the three broad types of motivation, according to the SDT sub-theory Organismic Integration Theory (OIT; Ryan & Deci, 2000b). *Amotivation* is the state where individuals lack interest and intention to act on a specific behaviour. The least autonomous regulation on the continuum is *external regulation*, when individuals engage in an activity to satisfy an external reward or avoid a punishment. *Introjected regulation* is a somewhat external regulation when individuals have partly taken in the behaviour, but it is mostly executed in order to avoid anxiety and guilt or to attain internal rewards and ego enhancement (e.g., pride). A more self-determined regulation is the *identified regulation*, when the behaviour is seen as personally meaningful and valued. *Integrated regulation* is the most autonomous form of extrinsic motivation and is defined as when the behaviour is adopted and is in line with one's other values and needs. *Intrinsic motivation* is on the far right of the continuum and is the

most self-determined, when people are driven by inherent enjoyment, interest and satisfaction (Ryan & Deci, 2000b).

Internalization of these regulations is a natural tendency and active process by which individuals move from the more external regulations (i.e., external and introjected) to the intrinsic regulations (i.e., identified, integrated and internal; Ryan & Deci, 2000a). This process especially applies to individuals who have moved past early childhood, when social pressures and responsibilities diminish the liberty to only participate in activities that are intrinsically motivated (Ryan & Deci, 2000b).

SDT suggests that the type of motivation an individual experiences depends on how well the basic psychological needs (BPN) are met in a particular context. Competence (e.g., feeling capable in handling tasks and challenges) relatedness (e.g., feeling connected and communion with other people) and autonomy (e.g., a sense of psychological freedom and being in control over one's actions) are the three components of BPN (Deci et al., 2001).

SDT can be used in explaining why people participate in sport and exercise, as it is assumed that satisfaction of the BPN leads to more autonomous regulation and a higher degree of intention to participate in the activity (Vansteenkiste et al., 2010; Teixeira et al., 2012; Teixeira et al., 2018). Previous research has found that satisfaction of the BPN and autonomy support leads to a higher behavioural intention to continue in organized sport and thus a lower intention to dropout (Gucciardi & Jackson, 2013; Quested et al., 2013). In contrast, Bailey et al. (2013) emphasized that when children sense a feeling of playing for external reasons (i.e., controlled motivation) such as pressure from parents, rewards or winning, the long-term likelihood for continued participation decreases. There is a resemblance between factors connected to dropout (Crane & Temple, 2015) and thwarting of the basic needs (e.g., perceptions of competence and need for competence, social pressures and the need for relatedness and competing priorities and the need for autonomy).

However, while usually carried out because of inherent satisfactions, activities and sport can be motivated for different reasons at the same time, especially when the level increases and higher demands follow. Coaches' approval, money, fame along with more challenging training (e.g., conditioning and weight training) could change athletes' motivational regulations and participation is both intrinsically and extrinsically motivated (Ryan & Deci, 2017). Thus, it could be argued that SDT and its elements, especially intrinsic motivation, are fundamental for continued participation in sport. Yet, in line with Ryan and Deci (2017), motivation for sport could be multiple and an athlete could be driven by different regulations.

Motivational Regulations and Person-Centered Approaches

In the past, variable-centered approaches have been a popular way of studying motivational regulations. For example, studies have used the self-determination index (SDI) or autonomous and controlled motivation (as separate variables) and examined them as predictors, correlates, or outcomes in relationship with other variables (e.g., Sarrazin et al., 2002; Fenton et al., 2014; Hodge & Lonsdale, 2011). Indeed, variable-centered approaches are useful when the study purpose is to examine the relationship between variables, or the influence of a set of variables on a given criterion variable. However, while variable-centered approaches have their strengths, they do rely on the assumption that "...the sample under investigation, and the population from which it is drawn, is homogeneous." (Meyer et al., 2013, p. 194). Based on this assumption, results from these approaches are generalized to the entire sample, which can be misleading if the sample (or population) in question is heterogeneous. As stated by SDT, individuals can hold several simultaneous motives for participating in an activity and it is therefore possible that subgroups can exist within a sample that vary in this regard. Examining regulations using only variable-centered approaches may not tell the complete story of the interplay and consequences of multiple

regulations being at play simultaneously. To identify whether these subgroups exist, one can use person-centered approaches.

Person-centered approaches, used to identify subgroups that share similar levels on a chosen set of variables within a sample (Meyer et al., 2013), have been used to identify motivational profiles in a variety of settings, such as educational (Ratelle et al., 2007), exercise (Lindwall et al., 2017), and sport (Gillet et al., 2009; Gillet et al., 2012; Gillet et al., 2013; Gustafsson et al., 2018; Tóth-Király et al., 2020). These studies have identified a varying number of profiles ranging from three (Ratelle et al., 2007; Gillet et al., 2009, study 2; Gillet et al., 2012; Gillet et al., 2013) to six (Lindwall et al., 2017) where commonly identified profiles across the studies have been: (1) a profile characterized by high levels of autonomous forms of regulations and low levels of controlled forms and amotivation (high AU-low C); (2) a profile characterized by low levels of autonomous forms and moderate to high levels of controlled forms and amotivation (low AU-mod/high C); (3) a profile characterized by moderate levels of autonomous and controlled forms, and low levels of amotivation (mod AU-C); and (4) a profile characterized of high levels of autonomous and controlled forms, and low levels of amotivation (high AU-C).

The methodologies used in these studies have differed; earlier studies have used cluster analyses (e.g., Gillet et al., 2009) and more recent studies have used latent profile analysis (LPA; e.g., Gustafsson et al., 2018). Whereas the main goal of LPA and cluster analyses is the same – to identify clusters that share similar values on a set of variables – LPA offers some advantages over cluster analyses (Pastor et al., 2007; Marsh et al., 2009). Although both methodologies are exploratory in nature, LPA is a model-based technique "...that allows for more flexible model specification." (Marsh et al., 2009, p. 194). For instance, in cluster analyses individuals are assigned exclusively to one cluster, whereas in LPA individuals have a probability to belong to all clusters to a certain degree (Pastor et al.,

2007). Furthermore, cluster analyses lack clear guidelines to determine the number of clusters, while LPA offers several fit indices to determine the optimal number of clusters. Finally, predictors (or covariates) can be included directly in the models of LPA, which help reduce the risk of Type 1 errors due to combining multiple analyses (Meyer & Morin, 2016).

Furthermore, outcome variables examined in relation to profiles have differed across studies. For example, performance (Gillet et al., 2009; Gillet et al., 2012; Gillet et al., 2013), burnout (Gillet et al., 2012, study 2; Gustafsson et al., 2018), subjective vitality and quantity of engagement (Tóth-Király et al., 2020) have been included as outcome variables in sport settings. Not surprisingly, the least self-determined profile displayed lower performance (e.g., Gillet et al., 2013), reported lower subjective vitality and quantity of engagement (Tóth-Király et al., 2020), and a greater reduced sense of accomplishment and sport devaluation (Gustafsson et al., 2018) in comparison to the most self-determined profiles, which is in accordance with predictions of SDT. Interestingly, no significant differences in academic and sport performance were found between the high AU-C and high AU-low C profiles in studies where both have been identified (Ratelle et al., 2007; Gillet et al., 2013). This is not completely in accordance with predictions of SDT, where one may hypothesize that the high AU-low C profile would yield the most positive outcomes. Gillet et al. (2013) have suggested that future research to examine whether this holds true for other positive outcomes than performance is warranted.

Whereas several different outcomes have been examined in relation to motivational profiles, few have examined their relationship to potential predictors. To the best of our knowledge, the only study that has examined the relationship between a predictor and identified profiles in sport settings is Tóth-Király et al. (2020), who found that general need fulfillment was associated with a higher likelihood of belonging to the more self-determined profiles. As such, there is room for more studies examining potential predictors. One of

interest would be how need-supportive and thwarting coaching behaviours relate to different profiles, which has also been called for in previous studies (Gillet et al., 2012; Gillet et al., 2013).

Coaching Behaviours

In line with the theoretical assumptions of SDT, previous research on coaching behaviour has found that autonomy-supportive coaching behaviours are connected to autonomous motivation (Hodge & Longsdale, 2011; Fenton et al., 2014; O'Neil & Hodge, 2020) and basic need satisfaction (Quested et al., 2013; Curran et al., 2014), while controlling coaching behaviours are connected to controlled motivation (Hodge & Longsdale, 2011; Fenton et al., 2014; O'Neil & Hodge, 2020) and basic need thwarting (Curran et al., 2014). Haerens et al. (2017) identified different coaching profiles based on autonomy supportive and controlling coaching behaviours; they found that coaching profiles with high autonomy support were related to more autonomous motivation and basic need satisfaction.

The perception of autonomy supportive coaching styles, which could lead to basic need satisfaction and autonomous motivation, have been connected to higher well-being and persistence to the sport (Mouratidis et al., 2010), lower levels of dropping out (Quested et al., 2013), and higher subjective vitality among athletes (López-Walle et al., 2012). In contrast, controlling coaching behaviours have been connected to need thwarting, which could predict ill-being (e.g., negative affect, eating disorders, depression, burnout, stress, physical symptoms; Bartholomew et al., 2011) and sport disaffection (Curran et al., 2014).

However, coaching behaviours are not the only factor connected to need frustration, challenges exceeding one's capabilities and conflicts with teammates have also been connected to need frustration (Bartholomew et al., 2011), suggesting that while coaching behaviour can influence need thwarting, it often occurs as a part of the environment among

other contributing factors. Langan et al. (2015) pointed out that the coach-athlete relationship is one of the most crucial factors influencing athletes' internalization and intrinsic motivation.

Rocchi et al. (2017) suggested six dimensions of coaching behaviour that could have an influence on athletes' BPN and thus the motivational quality. These were autonomy-supportive (AS), competence-supportive (CS), relatedness-supportive (RS), autonomy-thwarting (AT), competence-thwarting (CT), and relatedness-thwarting (RT). More specifically, the authors define each dimension as follows: AS: the coach should provide the athletes with rationale, taking in their perspectives and giving them a choice. CS: expressing positive feedback and acknowledging the athletes' improvements, while also believing in their goals and capabilities to reach them. RS: it emphasizes the importance of having a warm relationship with the athletes, where support, care, interest is central. Whereas AT emphasizes external rewards, making demands and using unfriendly language. CT includes being discouraging when athletes engage in challenging tasks, highlighting faults, enunciating that they are incompetent and doubting their goals. Lastly, RT considers being unavailable, exclusionary, non-listening and being dismissive with the athletes (Rocchi et al., 2017). These need thwarting and extrinsic factors (e.g., rewards, negative feedback, demands) are all determinants that could subvert sport motivation and participation, even if they are intended to motivate athletes (Ryan & Deci, 2017).

Most studies examining coaching behaviours and motivational regulations (e.g., Fenton et al., 2014) have used a variable-centered approach, with autonomous motivation (including identified regulation and intrinsic motivation) as one variable, and controlled motivation (including external and introjected regulation) as another variable. However, to the best our knowledge, no studies have examined motivational profiles and their relationship with different coaching behaviours.

Purpose

The purpose of the present study was to identify latent motivational profiles among female ice hockey players in Sweden using LPA, and examine how identified profiles relate to coaching behaviours and dropout. To that end, we (a) identified motivational profiles; (b) examined whether need-supportive and need-thwarting coaching behaviours predict latent motivational profile membership; and (c) examined differences in intention to dropout of ice hockey across different latent motivational profiles.

Method

Participants

Swedish female ice hockey players (N = 168) ages 15 and above participated in the present study. The inclusion criteria in the present study were that participants had to be an active ice hockey player in Sweden, female and above 15 years of age. Twenty-eight participants were excluded from the final sample due to fulfilling the inclusion criteria, leaving the final sample to 140 participants (M_{age} = 21.66, SD= 7.50 years of age). Nine participants were not included in the mean age due to selecting the age option "40+", but were included in the rest of the data analysis. Participants represented 39 clubs across Sweden and most participants (n = 132) reported ice hockey as their main sport. They also reported years of playing hockey (M = 10.97, SD = 6.03 years), number of seasons in their current club (M = 4.07, SD = 3.80 seasons) and with their current coach (M = 1.25, SD = 1.73 seasons). Further demographic information regarding participants can be found in Table 1.

Measurements and Instruments

Demographics

Demographic measurements of the participants include gender identity, age, main sport (e.g., "Is ice hockey your main sport?"), other sport participation (e.g., "Do you participate in any other sport?"), current club, years of playing, main occupation (e.g., "What is your main

occupation outside of ice hockey?"), number of seasons in current club, number of seasons with current coach and level of play.

The Behavioural Regulations in Sports Questionnaire

To assess participants' behavioural regulations toward their sport participation, a Swedish version of the Behavioural Regulations in Sports Questionnaire (BRSQ; Lonsdale et al., 2008), was used. Using the stem "I participate in my sport…", the participants are asked to answer how fitting the statement is for their reasons for sport participation on a seven-point likert scale (1 = *not true at all* and 7 = *very true*). The present study included five, four-item subscales whilst integrated regulation was excluded due to its previously identified problems (e.g., discriminant validity), as reported by Stenling et al. (2018). The items measured amotivation (e.g., "but I wonder what's the point"), external regulation (e.g., "because people push me to play"), introjected regulation (e.g., "because I would feel like a failure if I quit"), identified regulation (e.g., "because I value the benefits of my sport), and intrinsic motivation (e.g., "because it's fun"). Cronbach's alphas for BRSQ subscales ranged from .67 to .87 in the present study.

Interpersonal Behaviours Questionnaire in Sport

Participants' perceived coaching behaviours were measured using a Swedish version of the Interpersonal Behaviours Questionnaire in Sport (IBQ; Rocchi et al., 2017). Using the stem "My coach…", the item consists of 24 items with 6 subscales which assesses coaches' use of AS (e.g., "supports my decisions"), AT (e.g., "limits my choices"), CS (e.g., "encourages me to improve my skills"), CT (e.g., "points out that I will likely fail), RS (e.g., "takes the time to get to know me) and RT (e.g., "does not care about me"). Each statement is answered via a 7-point likert scale (1 = *do not agree* and 7 = *completely agree*). Cronbach's alphas in the present study for IBQ subscales ranged from .76 to .92.

Table 1.

Participants level of play and main occupation (N = 140)

Level of play	Main occupation					
	High School	Upper Secondary	University	Working	Ice Hockey	Total
SDHL	0	6	1	11	6	24
NDHL	4	30	13	11	1	59
Damtvåan	2	4	1	5	2	14
Damtrean	0	1	1	0	0	2
Damjunior	5	6	0	0	0	11
Flick A	3	1	0	0	0	4
Flick B	1	0	0	0	0	1
Rekreation	0	0	0	13	0	13
Other	7	0	0	5	0	12
Total	22	48	16	45	9	140

Note. SDHL = Svenska damhockeyligan; *NDHL* = Nationella damhockeyligan.

Intentions to Dropout of Sport

Participants' intention for dropout was measured using a Swedish version of a questionnaire based on Quested et al. (2013). Of the four items, two relate to the intention to dropout or continue participation (e.g., "I intend to continue my participation in ice hockey after this season"), and two relate to the intention to stay on the current team (e.g., "I intend to stay on my team"). The statements are answered on a seven-point likert scale (1 = *do not agree at all* and 7 = *completely agree*). To measure intention to dropout instead of continued participation, the item regarding continued participation was reversed. Cronbach's alphas in the present study for intention to dropout subscales ranged from .91 to .95.

Design and Procedure

In this cross-sectional study, most participants were recruited via a contact person from the Swedish Ice Hockey Association, who provided different contacts within the hockey

districts in Sweden with the questionnaire (see Appendix A.), which they forwarded to teams and players. In addition, contact information for representatives (e.g., coaches, managers, sports directors) were retrieved from team websites; they were invited to participate by forwarding it to the players in internal forums. The representatives were provided with the necessary information, which included information about the study and the questionnaire pack, which included an information letter, ethical considerations and the authors' contact information (see Appendix B.)

The present study strived to uphold ethical standards in line with the American Psychological Association (APA, 2017) and the Swedish Research Council (2017). Participants were provided with information about the study in the information letter. This contained ethical aspects, such as their right to withdraw from the study at any given point and that it was done voluntarily and anonymously. The data management question was raised, and participants were assured that the data would be handled confidentially. Contact information to the authors was provided and participants were encouraged to reach out with questions. Participants were required to sign an informed consent before starting the questionnaire.

Some participants were underage, which raises an ethical question. However, according to the Swedish Department of Education (2003), participants who are 15 y.o. can decide by themselves whether they want to participate in a study if they are informed and fully understand what the research entails for them.

Data Analysis

In the present study descriptive statistics were acquired using SPSS version 28, whereas Mplus software (version 8; Muthén & Muthén, 1998/2017) was used to conduct the LPA. Calculation of model parameters was done using maximum likelihood (ML) and the five BRSQ subscales (amotivation, external regulation, introjected regulation, identified

regulation and intrinsic motivation) were used as input variables when performing the LPA. Several models (with an increasing number of profiles) were tested, starting with one profile, in order to select the model with the optimal number of profiles. The present study tested models with one to five profiles in order to select the best fitting one. Based on recommendations of Nylund et al. (2007), the Log Likelihood (LL), the Bayesian Information Criterion (BIC; Henson et al., 2007), and the Sample-Size Adjusted BIC (SSA-BIC; Yang, 2006), as well as the Lo-Mendell-Rubin likelihood test (LMR; Lo et al., 2001) and the Bootstrapped Likelihood Ratio Test (BLRT; McLachlan & Peel, 2000), were used as criteria in order to determine the optimal number of profiles. For LL, BIC and SSA-BIC, lower values indicate a better fitting model. LMR and BLRT is used to compare neighbouring models (comparing a *K* profile solution with a *K*-1 profile solution), where a significant *p*-value (<.05) indicates that the *K* profile solution is a significantly better fit than the *K*-1 profile solution. Although not used for model selection, the entropy criterion was examined since it provides an indication (a value between 0 and 1) of how accurately participants are classified into profiles, where larger values indicate more accurate classification. Previous research, theoretical meaningfulness, substantive findings, as well as parsimony were also taken into account when deciding on the best solution, in addition to the different fit criteria.

Finally, when the final solution was decided, the relationship between predictor variables (need-supportive and need-thwarting coaching behaviours) and the probability of profile memberships was examined through multinominal logistic regression using the auxiliary "R3STEP" function in Mplus (Asparouhov & Muthén, 2014). Differences in intention to dropout across different profiles were examined using the auxiliary BCH method in Mplus (Asparouhov & Muthén, 2021), which is recommended for continuous distal outcomes.

Results

Descriptives and correlations across the different variables of the study are in Table 2. Deciding on the optimal number of profiles, models with one to five profiles were tested before the most adequate solution was chosen based upon statistical criteria and theoretical underpinning (Nylund et al., 2007). Description of the fit indices for every model are displayed in Table 3.

LL, BIC and SSA-BIC decreased for each model tested and was the lowest in the 5-profile solution, indicating a better fit as more profiles were added to the model. Entropy was stable over the different models (> .90), showing that participants were classified into the different profiles with a high accuracy. BLRT were significant across all models, which indicated that each model was a significantly better fit than the *K*-1 profile model. However, LMR indicated that the models did not significantly improve past the 2-profile model.

The 2- and 3-profile models were also compared regarding theoretical meaningfulness, substantive findings and parsimony in addition to the different fit indices.

Table 2.

Correlation Matrix of Variables in the Present Study

Variables	M	SD	1	2	3	4	5	6	7
1. AM	1.98	1.20	-						
2. EX	1.45	0.83	.45**	-					
3. INT	2.05	1.21	.63**	.64**	-				
4. ID	4.70	1.33	-.19*	.07	.01	-			
5. IM	6.59	0.61	-.70**	-.43**	-.45**	.24**	-		
6. NS	5.22	1.29	-.26**	.01	-.12	.17*	.35**	-	
7. NT	2.02	0.98	.40**	.19*	.29**	-.07	-.41**	-.71**	-
8. Dropout	2.06	1.41	.53**	.17*	.30**	-.15	-.45**	-.18*	.09

Note: AM = Amotivation; EX = External regulation; INT = Introjected regulation; ID = Identified regulation; IM = Intrinsic motivation; NS = Need supportive coaching behaviours; NT = Need thwarting coaching behaviours. *p<.05 **p<.01.

Table 3.

Fit Indices, Entropy and Model Comparisons

Model	LL	BIC	SSA-BIC	Entropy	LMR	BLRT	nC < 10/5%
1 Profile	-986.40	2022.22	1990.58	NA	NA	NA	NA
2 Profile	**-873.34**	**1825.74**	**1775.12**	**0.93**	**<.05**	**<.001**	**0/0**
3 Profile	-832.94	1774.57	1704.98	0.92	>.05	<.001	0/0
4 Profile	-799.31	1736.99	1648.40	0.96	>.05	<.001	0/1
5 Profile	-778.41	1724.84	1617.27	0.97	>.05	<.001	1/2

Note: Best fitting model indicated by boldface row.

LL = Log-likelihood; *BIC* = Bayesian Information Criterion; *SSA-BIC* = Sample-Size Adjusted Bayesian Information Criterion; *LMR p*-value for Adjusted Lo-Mendell-Rubin likelihood ratio test; *BLRT p*-value for bootstrap likelihood ratio test.

nC < 10/5% = number of profiles that include less than 10 and 5% of the total sample size

Comparing the 2-profile model with the 3-profile model, it was evident that Profile 2 did not substantively change between models (i.e, profile size and means were largely the same), whereas Profile 1 was split into two separate profiles in the 3-profile model. However, this substantive finding did not add theoretical meaningfulness. Thus, the combination of statistical fit indices and theoretical meaningfulness resulted in that the more parsimonious 2-profile model was decided as the final solution.

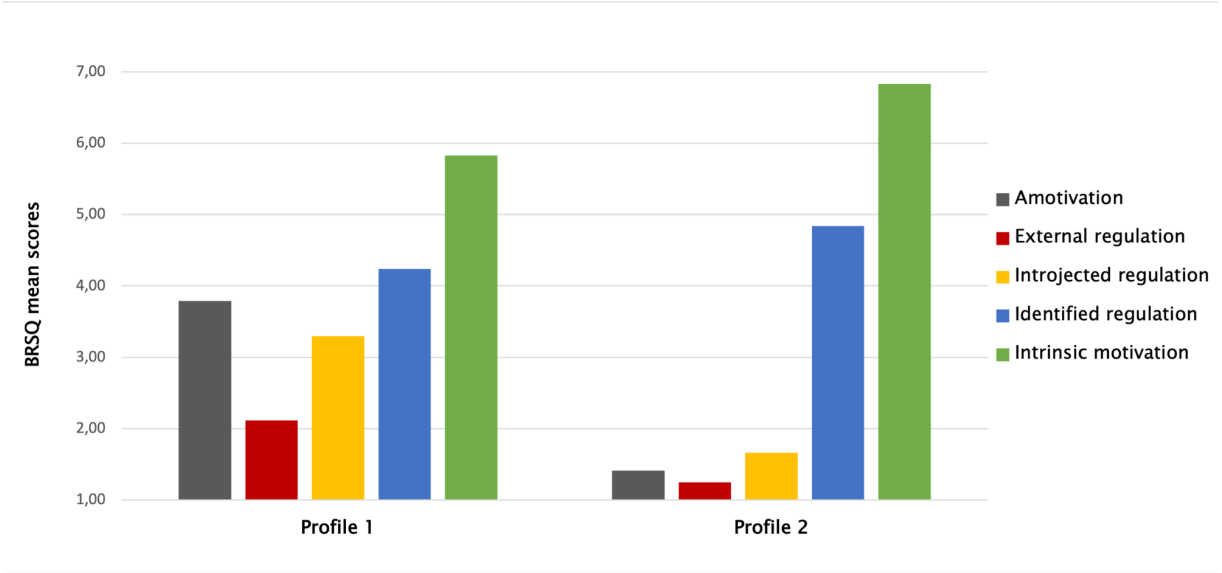
Figure 1 presents a graphical illustration of the profiles based on mean scores for BRSQ subscales. Comparing the two profiles, profile 1 (n = 34, 24%) was distinguished by moderate mean scores on amotivation (M = 3.83, p <.001), low scores on external regulation (M = 2.12, p <.001), moderate scores on introjected regulation (M = 3.30, p. <.001) and identified regulation (M = 4.24, p <.001), and high scores on intrinsic motivation (M = 5.83, p <.001). Profile 1 was therefore labelled as an "*ambiguously motivated profile*". In contrast, profile 2 (n = 106, 76%) was distinguished by very low scores on amotivation (M = 1.41, p <.001), external regulation (M = 1.25, p <.001) and introjected regulation (M = 1.66, p <.001),

moderate scores on identified regulation ($M = 4.84$, $p < .001$) and very high scores on intrinsic motivation ($M = 6.83$, $p < .001$). Profile 2 was therefore labelled as a "*self-determined profile*".

Results of multinominal logistic regression (see Table 4) showed that need-thwarting coaching behaviours were a statistically significant predictor of latent profile membership, whereas need-supportive coaching behaviours were not. That is, experiencing need-thwarting coaching behaviours was associated with an increased likelihood of belonging to Profile 1 compared to Profile 2. The overall test of equality of means across profiles was statistically significant for intentions to dropout, $\chi 2\ (1) = 28.27$, $p < .001$ (for means, see Table 4). More specifically, belonging to Profile 1 was associated with higher intentions of dropping out of sport compared to Profile 2.

Figure 1.

Illustration of BRSQ subscale mean scores across profiles



Note: Profile 1 = *ambiguously motivated profile;* Profile 2 = *self-determined profile.*

Table 4.

Effects of Predictors on Profile Membership, and Outcome Variable Mean Across Profiles.

Predictors	Profile 1	vs	Profile 2
	Coeff. (SE)		*OR*
Need-supportive coaching behaviours	-0.11 (0.23)		0.90
Need-thwarting coaching behaviours	0.78 (0.34)*		2.19
Outcome	*M (SE)*		*M (SE)*
Intention to Dropout	3.22 (0.25)[a]		1.70 (0.12)[b]

Note: SE = Standard Error; *OR* = Odds Ratio; *M* = Mean; **p*<.05.
Values in the same row that do not share the same letter [a,b] are significantly different at *p*<.001.
Profile 1 = *ambiguously motivated profile;* Profile 2 = *self-determined profile.*

Discussion

The present study aimed to identify latent motivational profiles in female ice hockey players in Sweden using latent profile analysis (LPA) and examine how identified profiles relate to coaching behaviours and dropout. To that end, we (a) identified motivational profiles; (b) examined whether need-supportive and need-thwarting coaching behaviours predict latent motivational profile membership; and (c) examined differences in intention to dropout of ice hockey across different latent motivational profiles.

The Identified Latent Motivational Profiles

Two motivational profiles were identified in the present study. Profile 1 (ambiguously motivated) was characterized by moderate mean scores on amotivation, introjected regulation and identified regulation, low scores on external regulation and high scores on intrinsic motivation. In contrast, profile 2 (self-determined) was characterized by very low scores on amotivation, external regulation and introjected regulation, moderate scores on identified regulation, and very high scores on intrinsic motivation. Previous research in sport and exercise settings has usually identified at least three profiles when using cluster analyses (e.g.,

Gillet et al., 2012; Gillet et al., 2013), and four to six when using LPA (Lindwall et al., 2017; Gustafsson et al., 2018; Tóth-Király et al., 2020). Thus, the present study identified few profiles compared to previous studies, especially ones using LPA. One reason might be the number of participants, as a small sample size is likely to generate fewer profiles (Marsh et al., 2009). However, there is no "golden rule" as to what number profiles are right, as it is largely up to the researcher in addition to the different fit indices (Marsh et al., 2009). The 2-profile solution was the most theoretically meaningful one when compared to the 3-profile solution and therefore deemed the most fitting for the present sample. Nonetheless, it is not unlikely that a larger sample could result in a solution with a larger number of profiles. Future research could benefit from using a larger sample when identifying motivational profiles in similar populations.

With regards to the contents of the latent motivational profiles, several previous studies have identified a profile that resembles the self-determined one in this study (e.g., Ratelle et al., 2007; Gillet et al., 2013; Lindwall et al., 2017). It is therefore not surprising that this profile was replicated in this sample. On the other hand, the ambiguously motivated profile stands out with its combination of moderate levels of amotivation and moderate to high levels of autonomous motivation. To the best of our knowledge, no profile resembling this one has been identified in previous research. This is an interesting finding, as being amotivated and autonomously motivated simultaneously might seem quite contradictory. However, SDT states that an individual can hold several reasons for taking part in an activity and these reasons can sometimes be competing (Ryan & Deci, 2017), which has also been supported by previous research (e.g., Lindwall et al., 2017). For example, it might be that individuals find ice hockey inherently fun and satisfying, but that existing social conditions (such as coach climate, team climate, etc.) thwart the basic needs and make individuals question why they are actually playing. Nonetheless, this type of profile has not been

identified previously and future research is needed to examine if the present findings can be replicated in other populations and contexts.

Predictors and Outcome of Latent Profile Membership

In the present study, need–thwarting coaching behaviours were a significant predictor of latent profile membership, whereas need-supportive coaching behaviours were not. That is, experiencing need-thwarting coaching behaviours was associated with an increased likelihood of belonging to Profile 1 compared to Profile 2. These results are not surprising, as thwarting basic needs is likely to promote both amotivation and controlled motivation according to SDT (Ryan & Deci, 2017). Furthermore, several previous studies have supported the connection between controlling coaching behaviours and controlled motivation (Hodge & Longsdale, 2011; Fenton et al., 2014; O'Neil & Hodge, 2020). As such, it is in line with both theory and previous research that latent profile membership would be predicted by need-thwarting coaching behaviours in profiles mostly differing in amotivation and controlled motivation. Nonetheless, future research should further examine the relationship between coaching behaviours and motivational profiles, as there are few studies that have investigated this.

Regarding intentions to dropout, Profile 1 membership was associated with significantly higher intentions of dropout compared to profile 2 membership. This is in line with SDT assumptions, which would predict that the profile exhibiting more amotivation and controlled motivation would be associated with higher intentions of dropout. This is also (at least partly) supported by previous research, which has connected both amotivation (Pelletier et al., 2001) and controlled motivation to dropout (Pelletier et al., 2001; Sarrazin et al., 2002). However, in contrast to Pelletier et al. (2001) and Sarrazin et al. (2002), Back et al. (2022) found no connection between controlled motivation and dropout. As such, the relationship between controlled motivation and dropout is ambiguous. Although differing in controlled motivation, the two profiles in the present study mostly differed in terms of amotivation. It is

therefore hard to tell whether the difference between profiles in intentions to dropout was due to the interplay of amotivation and controlled motivation or solely due to the difference in amotivation. Thus, the present study does not clarify the relationship between controlled motivation and dropout. It could however be argued that the present study further supports the connection between amotivation and dropout. Nonetheless, future research is needed to clarify this ambiguity and examine whether intentions to dropout align with actual dropout.

Strengths and Limitations of the Study

There are some limitations that need to be addressed in the present study. Firstly, due to the cross-sectional design, no causal directions can be drawn between coaching behaviors, profiles, and dropout. Secondly, the sample in the present study was small, which could limit the number of identified profiles (Marsh et al., 2009). It is therefore possible that a larger sample would identify more profiles. Nonetheless, the identified profiles differed in a theoretically meaningful way and were also related to both predictor and outcome variables in a theoretically logical fashion, which was also supported by previous research and should be considered a strength. Thirdly, the present study only examined intentions to dropout of sport and did not investigate whether intentions matched actual behaviour, which is a limitation. However, the use of behavioural intentions as a proxy for subsequent dropout has been supported in previous studies (Gardner et al., 2017; Back et al., 2022). Finally, the study sample included Swedish female ice hockey players across different ages and levels of play. It could therefore be argued that the sample is somewhat representative of Swedish female ice hockey as a whole. Nonetheless, generalizations of the findings to specific age groups and levels of play, as well as other ice hockey populations should be done with caution.

Implications and Future Research

The present study expands the knowledge regarding motivational profiles, their predictors, and outcomes. The findings add further support to the notion of SDT that there can

be multiple and sometimes competing motives at play simultaneously, and that subgroups can exist within a sample that vary in this regard.

Furthermore, findings showed that need-thwarting coaching behaviours were connected to an increased likelihood of membership in the ambiguously motivated profile, which also reported a higher intention to dropout. As such, the findings may benefit coaches and organizations that want to increase participation in female ice hockey, who should aim to promote their players' self-determined motivation. This can be done using need-supportive coaching behaviours such as providing athletes with choice and rationale, acknowledging improvements, and having a warm relationship with athletes (Ryan & Deci, 2017). Coaches should especially refrain from using need-thwarting behaviours such as making demands, being discouraging, and not listening to athletes, which can increase amotivation and controlled motivation and lead to decreased participation and dropout of ice hockey. Organizations could benefit from educating current and future coaches on the use and benefits of need-supportive behaviours and the drawbacks of need-thwarting and controlling behaviours.

As mentioned, future research may consider: (1) replicating the present study using a larger sample, as the number of identified latent motivational profiles likely was affected by the sample size; (2) examining the relationship between latent profiles and dropout using prospective studies to investigate if behavioural intentions match subsequent dropout; (3) further examining the relationship between coaching behaviours (and other potential predictors) and latent motivational profiles, as few studies have examined this in previous literature.

Final Conclusion

The present study aimed to identify latent motivational profiles in female ice hockey players in Sweden using LPA and examine how identified profiles relate to coaching

behaviours and dropout. This area was important to study, given the large decrease in players observed after mid-adolescence in Swedish female ice hockey and the definite mismatch between female and male participants in previous literature regarding dropout in sport. Two latent motivational profiles were identified: an ambiguously motivated profile and a self-determined profile. The former displayed higher levels of amotivation and controlled motivation and slightly lower levels of autonomous motivation than the latter. Findings showed that need-thwarting coaching behaviours were associated with an increased likelihood of membership in the ambiguously motivated profile, which also displayed significantly higher intentions to dropout of ice hockey. These findings may benefit coaches and organizations in Swedish female ice hockey who want to decrease dropout. It is recommended that key stakeholders aim to promote athletes' self-determined motivation and refrain from using need-thwarting and controlling behaviours to decrease dropout and increase sport participation further up in age. The findings also support the notion that individuals can have multiple and sometimes competing motives for taking part in sport. Future research is recommended to replicate the present study using a larger sample, use a prospective design, and examine other potential predictors of latent profile membership.

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Author's Contributions

This bachelor thesis is part of a joint study project where data collection, data analysis, and some parts of the thesis have been done together with Thage Pettersson.

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Appendix A. Questionnaire

Bakgrundsinformation

Nedan följer ett antal bakgrundsfrågor

Jag identifierar mig som:

o Tjej/Kvinna o Kille/Man o Annat: _____

Ålder: (Bestod av valbara alternativ mellan "under 15 år" till "40+").

Är ishockey din huvudsakliga idrott?

o Ja o Nej

Utövar du någon annan idrott förutom ishockey?

o Ja o Nej

Hur många år har du spelat ishockey?: (Bestod av valbara alternativ från "Detta är mitt första år" till "30+ år").

Vilken klubb spelar du för?: _____

Hur många år har du spelat för din nuvarande klubb?: (Bestod av valbara alternativ från "Detta är mitt första år i klubben" till "30+ år").

Vilken nivå/liga har du spelat majoriteten av dina matcher i denna säsongen?:

o SDHL o NDHL DamEttan o DamTvåan o DamTrean o Damjunior o Dam18

o Flick A o Flick B o Annat: _____

Vad är din huvudsakliga sysselsättning utanför idrotten?

o Högstadiet o Gymnasiet o Högskola/universitet o Arbetar

o Ishockey är min huvudsakliga sysselsättning o Annat: _____

Hur många säsonger har du spenderat med din nuvarande tränare?:

o Detta är första säsongen o Andra säsongen o Tredje säsongen o Fjärde säsongen

o Femte säsongen o Sjätte säsongen o Sjunde säsongen o Åttonde säsongen

○ Nionde säsongen ○ Tionde säsongen eller fler

Del 1

Här är ett antal orsaker till varför personer deltar i idrott. Fundera på varför du håller på med ishockey och välj den siffra som bäst stämmer in på dig.

Nedan får du fylla i valfritt svar på en skala 1-7, där:

1 = Stämmer inte alls; … ; 4 = Stämmer delvis; … ; 7 = Stämmer mycket bra

Jag håller på med ishockey…

för att jag tycker om det	1	2	3	4	5	6	7
för att jag skulle skämmas om jag slutade	1	2	3	4	5	6	7
men jag vet inte riktigt varför längre	1	2	3	4	5	6	7
för att jag skulle känna mig misslyckad om jag slutade	1	2	3	4	5	6	7
men jag undrar vad det är för mening med det	1	2	3	4	5	6	7
för att fördelarna mitt ishockeyspelande ger mig är viktiga	1	2	3	4	5	6	7
för om jag inte gjorde det så skulle andra personer bli missnöjda med mig	1	2	3	4	5	6	7
för att jag gillar det	1	2	3	4	5	6	7
för att jag känner mig skyldig att fortsätta	1	2	3	4	5	6	7
men jag ifrågasätter varför jag fortsätter	1	2	3	4	5	6	7
för att jag känner mig pressad av andra personer att spela ishockey	1	2	3	4	5	6	7
för att det är kul	1	2	3	4	5	6	7
för att den lär mig att vara självdisciplinerad	1	2	3	4	5	6	7
för att jag skulle få skuldkänslor om jag slutade	1	2	3	4	5	6	7
för att jag trivs med det	1	2	3	4	5	6	7
för att andra pressar mig att spela ishockey	1	2	3	4	5	6	7
för att jag uppskattar fördelarna med mitt ishockeyspelande	1	2	3	4	5	6	7
men jag ifrågasätter varför jag utsätter mig för detta	1	2	3	4	5	6	7
för att det är ett bra sätt att lära mig saker jag kan ha nytta av i mitt liv	1	2	3	4	5	6	7

för att andra personer som vill att jag ska spela ishockey ska bli nöjda	1	2	3	4	5	6	7

Del 2

Här kommer några påståenden som behandlar de erfarenheter du har med Din/Dina tränare. Tränare har olika sätt att arbeta med spelare och det är intressant att veta mer om dina erfarenheter.

Nedan har du möjligheten att kryssa i valfritt alternativ på en skala 1-7, där:
1 = Håller inte alls med; ... ; 4 = Neutral; ... ; 7 = Håller helt med

Min tränare...

ger mig friheten att fatta egna beslut	1	2	3	4	5	6	7
stöttar mina beslut	1	2	3	4	5	6	7
stöttar de val som jag själv gör	1	2	3	4	5	6	7
uppmuntrar mig till att fatta egna beslut	1	2	3	4	5	6	7
pressar mig att göra saker på sitt sätt	1	2	3	4	5	6	7
påtvingar sina åsikter på mig	1	2	3	4	5	6	7
pressar mig att anamma vissa beteenden	1	2	3	4	5	6	7
begränsar mina valmöjligheter	1	2	3	4	5	6	7
uppmuntrar mig att förbättra mina färdigheter	1	2	3	4	5	6	7
ger värdefull feedback	1	2	3	4	5	6	7
tror på min förmåga att nå mina mål	1	2	3	4	5	6	7
berättar för mig att jag kan åstadkomma saker	1	2	3	4	5	6	7
påpekar att jag troligen kommer misslyckas	1	2	3	4	5	6	7
förmedlar budskapet till mig att jag inkompetent	1	2	3	4	5	6	7
tivlar på min förmåga att utvecklas	1	2	3	4	5	6	7
ifrågasätter min förmåga att övervinna utmaningar	1	2	3	4	5	6	7
är intresserad av det jag gör	1	2	3	4	5	6	7
tar sig tiden att lära känna mig	1	2	3	4	5	6	7
tycker genuint om att spendera tid med mig	1	2	3	4	5	6	7
relaterar till mig	1	2	3	4	5	6	7

tröstar mig inte när jag känner mig nere	1	2	3	4	5	6	7
är frånvarande när vi spenderar tid ihop	1	2	3	4	5	6	7
söker inte kontakt med mig	1	2	3	4	5	6	7
bryr sig inte om mig	1	2	3	4	5	6	7

Del 3

Läs följande påståenden och kryssa i den siffra som bäst stämmer in på dig och din upplevelse av ditt idrottande. Det finns inga korrekta eller felaktiga svar, så fundera inte för mycket på varje påstående. Svara på alla påståenden och svara ärligt.

Nedan har du möjligheten att kryssa i valfritt alternativ på en skala 1-7, där:

1 = Håller inte alls med; ... ; 4 = Neutral; ... ; 7 = Håller helt med

Jag planerar att avsluta mitt deltagande i ishockey efter denna säsong	1	2	3	4	5	6	7
Jag planerar att sluta i min klubb/förening	1	2	3	4	5	6	7
Jag planerar att fortsätta mitt deltagande i ishockey efter denna säsong	1	2	3	4	5	6	7
Jag planerar att vara kvar i min klubb/förening	1	2	3	4	5	6	7

Unik kod

För att skapa en unik kod ber vi dig här skriva en sexsiffrig bokstavs- och sifferkod likt den som visas nedan.

Två första bokstäverna av din pappas namn. Ex. Anders → AN. Den dagen på månaden du är född. Ex. 8e Maj → 08. Två första bokstäverna av din födelsestad. Ex. Stockholm → ST. Exempel på unik kod: AN08ST

:_____

Tack för din medverkan!

Appendix B. Information Letter and Informed Consent

Informationsbrev
Förfrågan om deltagande i studien "*Motivationsprofiler inom svensk flick- och damishockey*".

Bakgrund och syfte
Motivation är en viktig komponent för att bibehålla sitt engagemang i idrott över tid. Vi människor kan ha flera olika motiv för att idrotta (s.k. motivationsregleringar), där vissa är mer hållbara och kopplade till att vi fortsätter med vår idrott över tid, och andra är kopplade till en ökad risk att vi slutar. Tidigare forskning har tittat på dessa som separata delar, men få studier har identifierat olika profiler av motivationsregleringar och undersökt hur dessa skiljer sig åt i utfall som t.ex. intention att fortsätta idrotta. Syftet med denna studie är att identifiera olika motivationsprofiler inom flick- och damishockey, och undersöka hur dessa skiljer sig åt i olika utfall. Vi hoppas även på att utöka forskningen inom flick- och damidrott, ett område i klar minoritet när det gäller tidigare forskning.

Förfrågan om deltagande
Studien ämnar att rekrytera minst 200 deltagare och vi söker dig som är flick- eller damishockeyspelare och är 15 år och äldre. Du som väljer att delta kommer att få besvara ett frågeformulär online.

Deltagandet är frivilligt
Det är frivilligt att vara med i studien och du bestämmer själv om du vill vara med eller inte. Om du vill vara med i studien men sedan ångrar dig, kan du när som helst sluta vara med utan att du behöver tala om varför. Om du inte vill vara med i studien efter inskickat svar ska du kontakta en utav de ansvariga för studien, kontaktuppgifter finns längst ned på denna sida.

Hur går studien till?
Studien kommer att äga rum under HT22 och slutföras i Januari 2023. Datainsamlingen för studien kommer att ske fram till fredagen den 20/12-22 klockan 12.00. Om du vill vara med i studien kommer du att få svara på frågor, alternativt påståenden, ur ett formulär. Du kommer att få svara på dessa under ett tillfälle. Frågorna behandlar motivationsregleringar, upplevda tränarbeteenden och intentionen till fortsatt deltagande i idrotten. Formuläret tar ungefär 5-10 minuter att genomföra.

Vad är bra med att vara med i studien?
Genom att vara med i studien får du möjligheten att hjälpa Svenska Ishockeyförbundet och studenter från Högskolan i Halmstad att undersöka motivationsprofiler och deras koppling till upplevda tränarbeteenden och fortsatt deltagande. Du hjälper till med att utöka förståelsen för olika motivationsprofilers relation till olika tränarbeteenden och intention att sluta spela ishockey. På längre sikt kan kunskapen och förståelsen komma att ha betydande inverkan på

tränarutbildningar inom idrotten och förhoppningsvis öka antalet spelare vilket deltar i idrotten längre upp i åldrarna. Det finns inga kända risker med att delta i studien.

Hantering av data och sekretess
Några viktiga saker att känna till:

Du skall inte skriva ditt namn på enkäten.

Du kommer att få skriva ett kodnummer i slutet av enkäten. Detta är för att kunna koppla samman dina svar vid en eventuell uppföljande studie längre fram i tiden. Listan med kodnummer kommer att lagras på ett säkert sätt och senare raderas när det bedöms som obehövligt.

Försäkring
Deltagare i forskningsstudie vid Högskolan i Halmstad är försäkrad via kammarkollegiet.

Dina uppgifter är skyddade
Allt datamaterial med dina svar kommer att behandlas så att inte obehöriga kan ta del av det. Resultatet kommer att redovisas på gruppnivå så att inga enskilda resultat kan härledas. Ansvarig för dina personuppgifter är forskningshuvudman Högskolan i Halmstad. Enligt EU:s dataskyddsförordning har du rätt att kostnadsfritt få ta del av de uppgifter om dig som hanteras i studien. Du har rätt att kontakta Högskolan i Halmstad och begära tillgång till de personuppgifter Högskolan i Halmstad behandlar om dig, begära rättelse, radering eller begränsning av behandlingen av dina personuppgifter, invända mot behandlingen av dina personuppgifter, samt inge klagomål till Högskolan i Halmstad eller Datainspektionen (www.datainspektionen.se). Du kan läsa mer om hur Högskolan behandlar dina personuppgifter på Högskolan i Halmstads webbplats https://www.hh.se/om-webbplatsen/behandling-av-personuppgifter.html Om du har frågor kan du även kontakta Högskolan i Halmstads Dataskyddsombud på dataskydd@hh.se eller telefon 035-16 73 73

Hur får jag information om resultatet av studien?
Önskar du ta del av resultatet av studien kontaktar du någon av kontaktpersonerna som du finner i slutet av detta informationsbrevet.

Ansvariga för studien
Om du har några frågor eller vill veta mer, ring eller maila gärna till någon av oss. Ansvarig för studien är:

Student
John Groth
Psykologi inriktning idrott & motion
Akademin för Hälsa och Välfärd

Högskolan i Halmstad
070-375 52 44
johgro20@student.hh.se

Student
Thage Pettersson
Psykologi inriktning idrott & motion
Akademin för Hälsa och Välfärd
Högskolan i Halmstad
076-133 23 45
thapet20@student.hh.se

Handledare
Prof. Xavier Sanchez
Akademin för Hälsa och Välfärd
Högskolan i Halmstad
xavier.sanchez@hh.se

Informerat samtycke
Jag har fått ta del av informationen om studien "Motivationsprofiler inom svensk flick- och damishockey". Genom att signera detta dokument ger jag mitt samtycke till att deltaga i studien och att jag är minst 15 år gammal. Jag är medveten om att deltagandet är frivilligt och att när jag när som helst kan avsluta min medverkan utan att ange orsak.

- ▢ Härmed ger jag mitt samtycke till att delta i undersökningen