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# Profiling the Coaches of Norway

## A national survey report of sports coaches & coaching

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## Synopsis

In 2017, Inland Norway University of Applied Sciences surveyed a large number sports coaches across Norway. The survey sought to get to know the men and women who coach the children, youth, and adults of Norway. The data of this survey project, titled Profiling the Coaches of Norway (PROCON), is based on responses from 5977 coaches, 4404 men and 1559 women aged from 15 to 83 years old. The coaches represented 104 sports from 49 federations, and came from every county in Norway. The present publication reports on what we learned about the coaches and coaching in Norway; the educational and sports backgrounds they come from, the experience they bring with them, the sports knowledge and skills they possess; how they think about learning and their future in coaching; what hinders their learning and advancement as coaches, and why some of them stopped coaching. While the PROCON sample is one of the largest captured in a coaches' survey study worldwide, we cannot be sure how representative it is of Norway's sports coaches, as the total number of coaches working within sports across all levels nationwide is unknown.

## Key Findings

- Seventy-five percent of all coaches are volunteers and 25% are employed. Most male coaches are volunteers (78%), majority of whom are aged between 40 and 49 (48%), and married or in cohabitation relationships with children (75%). Most of the female coaches are also volunteers (67%), aged between 40 and 49 (35%), and married or in cohabitation relationships with children (55%). Most employed men coaches are aged between 40 - 49 (31%) and most employed women coaches are between 20 - 29 years old (37%).

- Majority of male and female coaches have education at the university level (67% of men and of women) and sports coaching education/training (77% of men and 72% of women). Sixty-nine percent of the coaches with sports coaching education pursued this under the auspices of NIF/national federation/regional confederation. Most of them have followed the current trainer model, Trenerløypa (64%). Ten percent of all coaches have completed specialized education on coaching athletes with disabilities.

- They all (99 %) have extensive experience as athletes themselves; 64% of them were active as children, 76% as youth, and 68% as adults.

- Many coaches have extensive experience, some up to more than 23 years; 55% of all coaches reported never taking a break from coaching. Of them, 41% have 0 to 5 years of consecutive experience, 27% have 6 to 10 years, 21% have 11 to 22 years, and 11% have 23 or more years of experience.

- Seventy-three percent of the coaches have experience with coaching both genders, primarily at the local level (95%). More women than men have experience in coaching young athletes (up to the age of 12), and more men than women have experience coaching athletes over the age of 12. A total of 12% of the coaches (7% of men and 5% of women) have experience in coaching athletes with disabilities (n = 708). Vast majority of coaches who are married or in a cohabitation relationship with children or are single with children (n = 3651) have experience as parent coaches (89% of men and 85% of women).

- Men's entry into coaching peaks between the ages of 30 and 39 (34%), primarily as volunteer coaches. Women's entry into coaching peaks between the ages of 15 and 19 (33%), primarily as employed coaches. Seventy-two percent of the coaches report that the top reason for entering coaching is to contribute to athlete learning and development, regardless of the coaches' gender and involvement status.

- In relation to employed coaches, significantly fewer women than men are offered coaching jobs (24% of women and 49% of men). Coaching is not a full-time occupation; majority of employed coaches' works part-time (79%). Fewer women (34%) work without a contract than men (47%).

- The top reason for exiting coaching is work-life balance, which appears to burden significantly more women (45%) than men (26%). Not much challenges the wellbeing of coaches in Norway. Nevertheless, loneliness at work, salary, and stressors outside coaching have some negative effect on the coaches.

- A large number of coaches (75%) is informed of the ethical guidelines that govern sports before started coaching either in writing or orally. Fifty percent of those informed endorse the ethical guidelines by signing them.

- Most coaches still wish to expand their knowledge, competences and/or skills, primarily on sport specific knowledge. Informal knowledge sources, like shadowing other coaches, athlete feedback and reflection, are experienced as the most impactful sources for improving coaching practices.

- Fifty-eight percent of coaches have experienced obstacles in gaining sports coaching education. Eighty-one percent of them report lack of time as the most prominent barrier (81%) towards education. With regard to advancing as a coach, 24% experienced obstacles; the largest obstacles experienced are lack of experience (36%) and knowledge (29%).

- Men and women, regardless of the context they coach in and their educational level, acknowledge the underrepresentation of women coaches in Norwegian sports. Fifty-two percent believe this is true of youth sports and 68% believe it is true of elite sports.

- Thirty-five percent of coaches believe that the best thing by far, in their coaching is the opportunities they have to stimulate enjoyment, development, and good experiences for their athletes.

# Contents

# Background and Purpose

In Norway, sports is a way of life, a traditionally strong social institution that shapes people, communities and values. It extends from recreational sports to professional sports, from young children to adult athletes, from able-bodied athletes to athletes with disabilities, from men, women and the transgendered, homosexuals and heterosexuals, from native Norwegians to immigrants. In few words, sports are available to all people in Norway.

In order for politicians and sport stakeholders to support sports in Norway, it is important to ensure positive and high quality of experiences for the participants. High-quality sports experiences do not happen by accident. Rather, they are often well planned and executed by a coach who is properly trained for the context in which he or she works. Through their work, coaches can provide positive experiences, which in turn inspire the participants to learn a sport, to develop, to stay involved, and to achieve personal and sports-related goals. Coaches are definitely important to Norwegian sports, and considering the position of sports in society, they are key players in the experiences of many people--from development and mastery at the local level to top performance at international competitions.

Every coach carries with him/her a certain background, education and experiences that make the individual and his/her work unique. But how well do we know Norwegian coaches? Do we know enough about who they are, where they come from and where they want to go as coaches? We have volunteers and paid coaches, we have men and women, we have coaches who work with recreational sports and professional sports, and we have coaches who train their children or who have chosen to make a career in coaching.

In order to fill this gap in our knowledge, the purpose of this project was to profile Norway's coaches. This knowledge would allow us to support those who work with coaches in Norwegian sports, so that we can help and advance the role of the coach beyond the status quo in the best way possible. The following research questions guided this project:

1. Who coaches Norwegian sports?
    a. What characterizes young coaches, and how can we support young people who want to become coaches?
    b. What characterizes volunteer coaches, and what support can we give this group?
    c. What characterizes employed coaches, and how can we support this growing group?
2. What are the main pathways for entering coaching?
    a. Do the pathways differ for those going into volunteering and paid coaching?
    b. What can we learn from those who stopped coaching?
3. What differences and similarities are there between male and female coaches?
    a. What factors can help us close the gender gap and support women's path into coaching?

## Structure of the Report

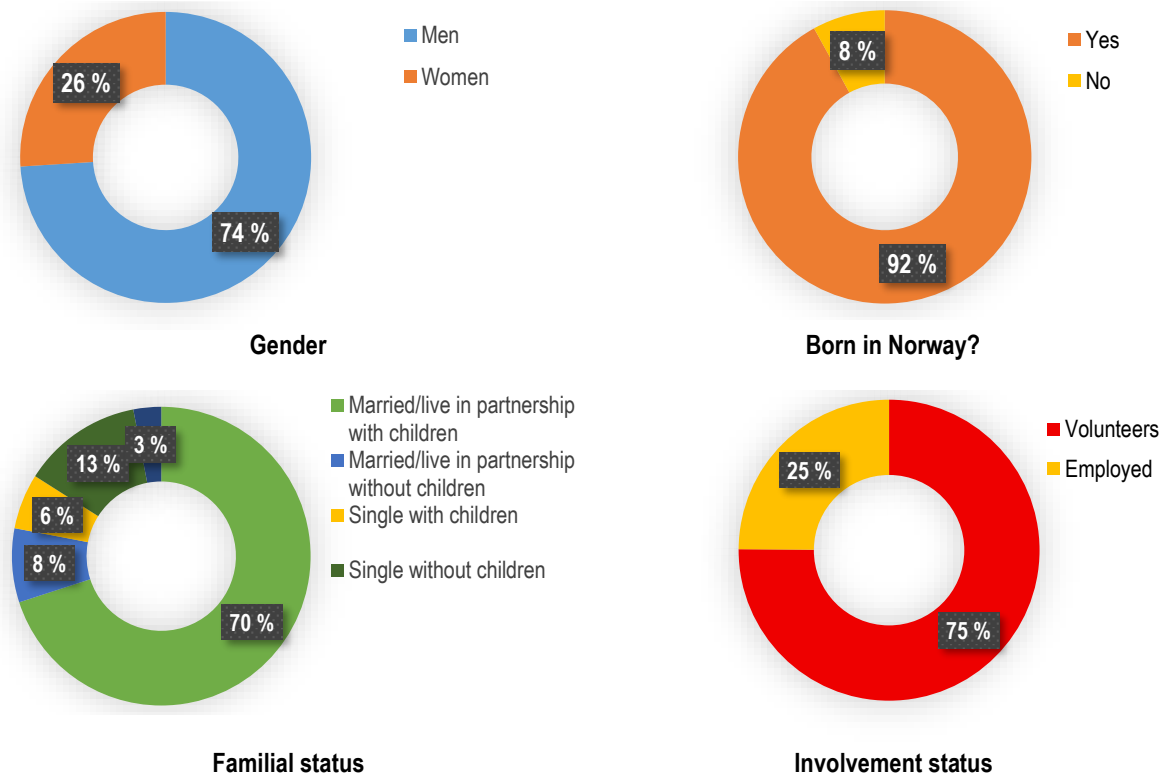
The report starts with a detailed presentation of the findings. In the findings section, we present and discuss only statistically significant findings. The statistical differences reported here are significant at the .05 probability level (they are marked on the tables with an asterisk). We provide figures and tables for the most prominent findings. The detailed report ends with our assessment of what is key towards understanding the coaches and how we can strengthen sports coaching in Norway. In Appendix A, supplementary tables are presented to give the reader an in-depth view of the data collected. Appendix B presents the methodological approach and procedures employed in this project. Finally, Appendix C presents key findings for six federations. Analyses were performed for these federations based on the principle that coaches' participation numbers should be high enough to make them unidentifiable from all possible angles.

# PROCON Findings

## Demographics

Figure 1 shows that sports coaching in Norway is predominantly a volunteer activity for men, with the majority of them born in Norway and married or in cohabitation relationships with children. Seventy-five percent of the coaches are volunteers and 25% are employed. Seventy-eight percent of the men coaches are volunteers, while 67% of the women are volunteers. Seventy-five percent of men and 55% of women are married or in cohabitation relationships. Of the volunteer coaches, 77% are men and 23% are women, while 65% of the employed coaches are men and 35% are women. Among the employed, 79% work part-time and 21% full-time, revealing that few have coaching as their main source of income. Of the employed coaches, 21% are employed by clubs/teams/sports organizations, 2% work for federations, and 2% work elsewhere (for example private and public upper secondary schools, teams and district/regional teams).

*Figure 1. The percentage of coaches by gender, country of birth, familial and involvement status*




Of the 503 coaches not born in Norway, the average period of residency is 19 years. Twenty-three percent moved to Norway for sports-related reasons: 13% to work as coaches, 7% to train and compete as athletes and 3% to work in sports-related positions other than coaching. Table 1 breaks down the reasons why coaches moved to Norway by gender and involvement status.

*Table 1. Reasons for coaches not born in Norway to move to Norway by gender and involvement status*

| | ***Men*** | ***Women*** | ***Volunteers*** | ***Employed*** |
|---|---|---|---|---|
| Moved as athletes | 74% | 26% | 35% | 65% |
| Moved as coaches | 77% | 23% | 12% | 88% |
| Moved for sports-related position | 64% | 36% | 36% | 64% |
| Moved for reasons unrelated to sports | 72% | 28% | 70% | 30% |

The PROCON coaches' ages range from 15 to 83, with an average age of 42. Forty-five percent of the coaches are aged between 40 and 49. Looking at men's and women's ages, Figures 2a, b, c, and d illustrate significant findings. More women (51%) than men (25%) coach at a young age (15 to 39). This pattern reverses at the age group of 40 to 49, with 48% men and 35% women coaching, and the trend continues for older age groups. Volunteer coaches show a relatively similar age distribution as for the overall sample, but there are some differences in the employed group. Based on Figure 2d, both men and women's numbers rise until the age of 29, and then drop at the age group of 30 to 39. Beyond the age of 40, men's participation in coaching peaks at 40 to 49, while women's numbers are stably lower after the age of 40. This data should be further explored in conjunction with the female coaches' views that it is difficult to combine coaching and family (see Table I in Appendix A).

*Figure 2a. All coaches' ages*

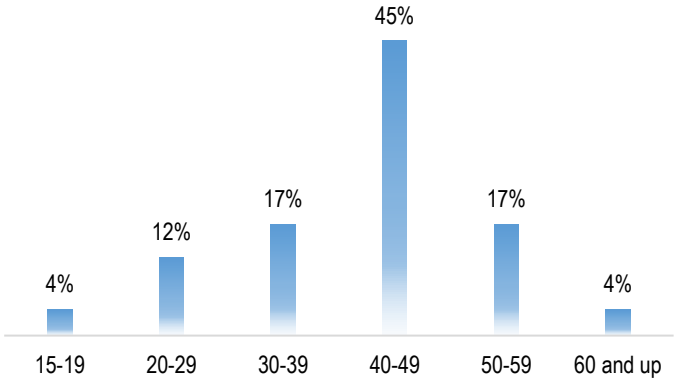



*Figure 2b. Coaches' ages by gender*

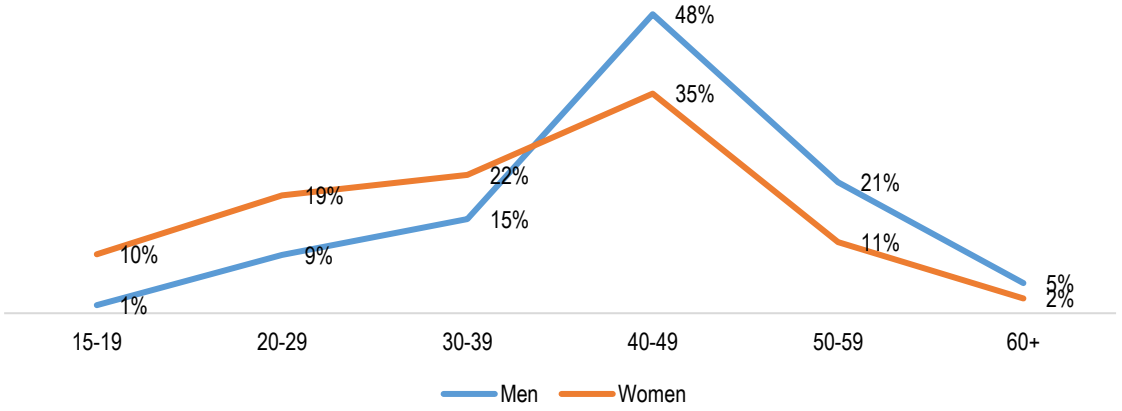



*Figure 2c. Coaches' ages for the volunteers*

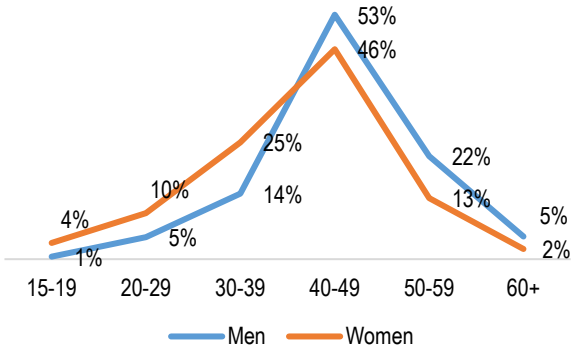
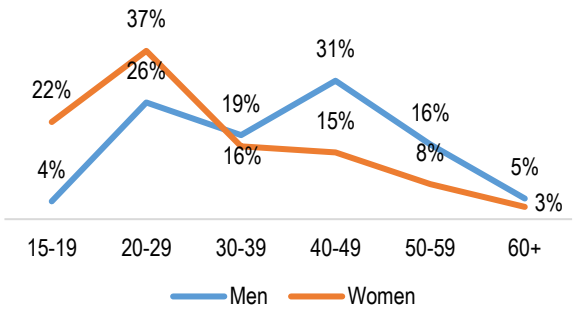



*Figure 2d. Coaches' ages for the employed*



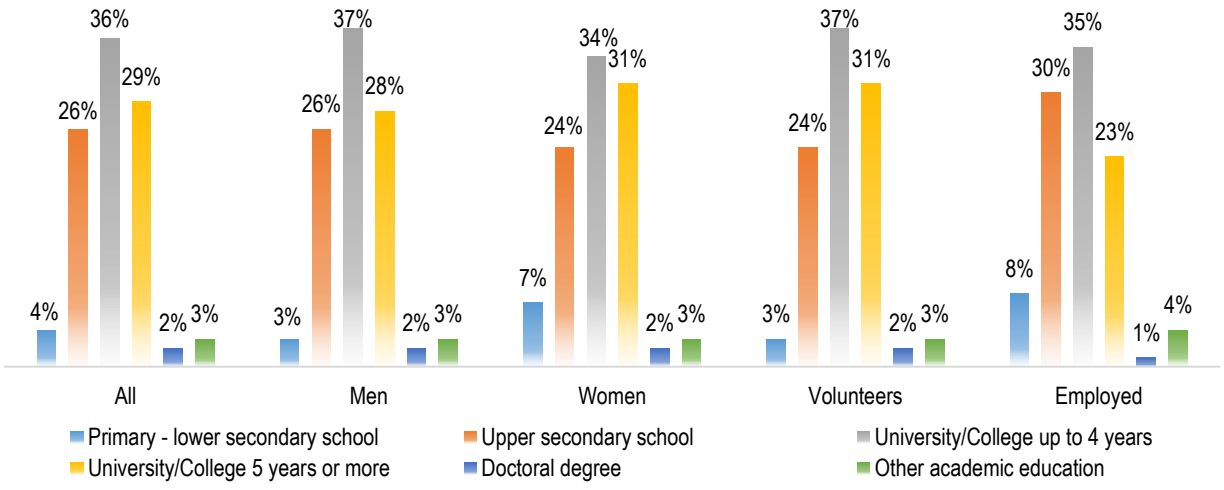
The PROCON coaches represent 104 sports, with 90% of them coaching one sport and 10% coaching two or more sports. The sports with the highest representation are football, handball, swimming, artistic gymnastics and cross-country skiing (Table II in Appendix A shows all sports). Forty-nine sports federations are represented in the study (Table III in Appendix A shows all federations). Gender and involvement status are reported in Table III, but only for the few federations with high enough numbers of responses to ensure anonymity for the surveyed coaches. From the men and women's representation percentages reported in Table III, we get an indication that traditionally masculine sports, like football, have a higher number of male coaches, whereas sports traditionally thought as feminine, like gymnastics, have a higher number of female coaches.

Of the total sample, at the time of data collection, 84% were active as coaches (n = 5046), while 16% had stopped or was taking a break (inactive) from coaching (n = 930). Seventy-six percent of the active coaches were men and 24% were women and of the inactive, 36% were women and 64% men. The coaches we surveyed work all over Norway. The counties with highest representation in the PROCON are Akershus, Hordaland, Oslo, Rogaland, and Sør-Trøndelag (Table IV in Appendix A shows participation percentages from all counties).

## Education

Sixty-seven percent of the coaches have completed higher education. The most common study areas pursued in the coaches' higher education up to 5 years are business (n = 924), engineering and construction (n = 619), sports sciences (n = 486), teacher education (n = 382), health and medicine (n = 377), and social sciences (n = 362). The most common study areas in which coaches held doctoral degrees are natural sciences (n = 48), medicine and health sciences (n = 25), and social sciences (n = 21). Figure 3 shows the levels of general education attained by men and women, volunteers and employed.

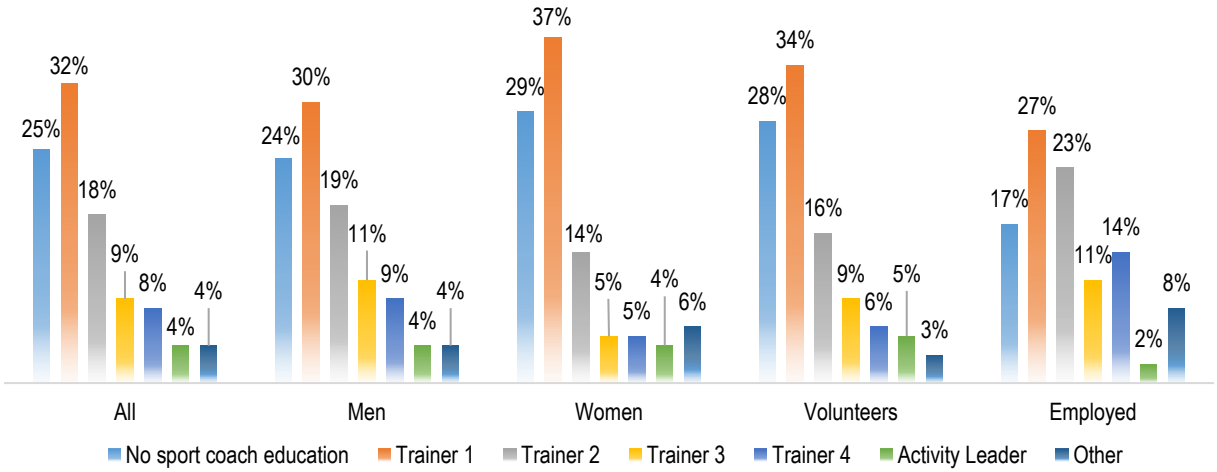
*Figure 3. Highest level of general education completed by gender and involvement status*




With regard to coaching, 76% of the coaches are educated in sports coaching (77% of men and 72% of women), signifying that 24% of coaches work without coaching education. Their coaching education is most commonly attained via NIF/national federation/regional confederation (69%), then from other institutions like a higher education institution, army or upper secondary school (14%), and finally via an international body (5%). Depending on the time of the education and the certification system in effect, they hold a wide range of certifications: 14% of the certifications were attained before 1997 (Course A, B, C, D), 22% between 1998 and 2010 (Trainer 1, 2, 3), and 64% after 2011, with the current certification system. These percentages show that more coaches have taken their education following the current model, which may be due to a greater interest in specialized education for

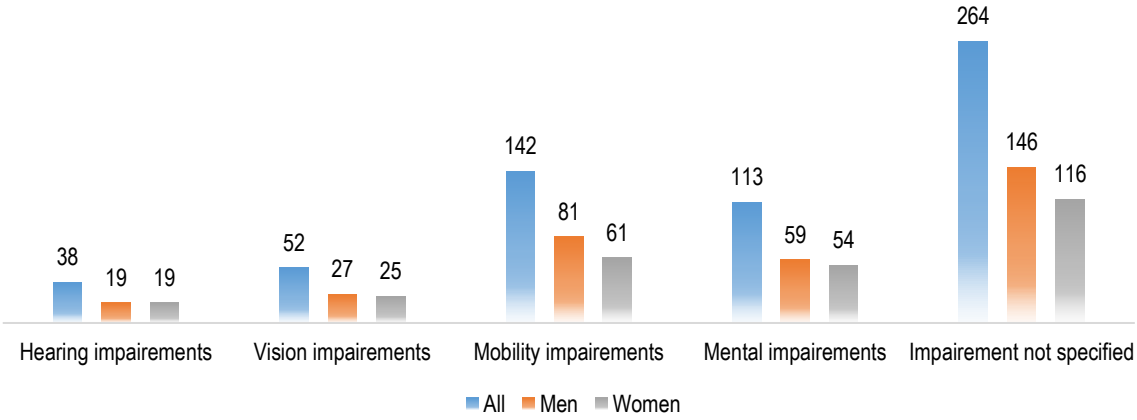
those who coach and an increase in course availability. Figure 4 illustrates coaching education levels attained for all coaches, men and women, volunteers and employed (pre-2011 certifications were converted and organized using the current system, that of Trainer 1, 2, 3, 4).

*Figure 4. Highest level of sports coaching certification completed by gender and involvement status*




Of the coaches who were coaching athletes with disabilities at data collection time (n = 292), 81% of them hold coaching certifications. Majority of these coaches also received their coaching education from NIF/national federation/regional confederation (n = 217). There appears to be a higher number of individuals coaching in this context with sports coaching education than in the general PROCON sample. Ten percent of all coaches reported that they were specifically educated to coach athletes with disabilities. Due to low percentages, Figure 5 shows the actual numbers of coaches educated on different impairments.

*Figure 5. Number of coaches with specialized education on disabilities by gender*



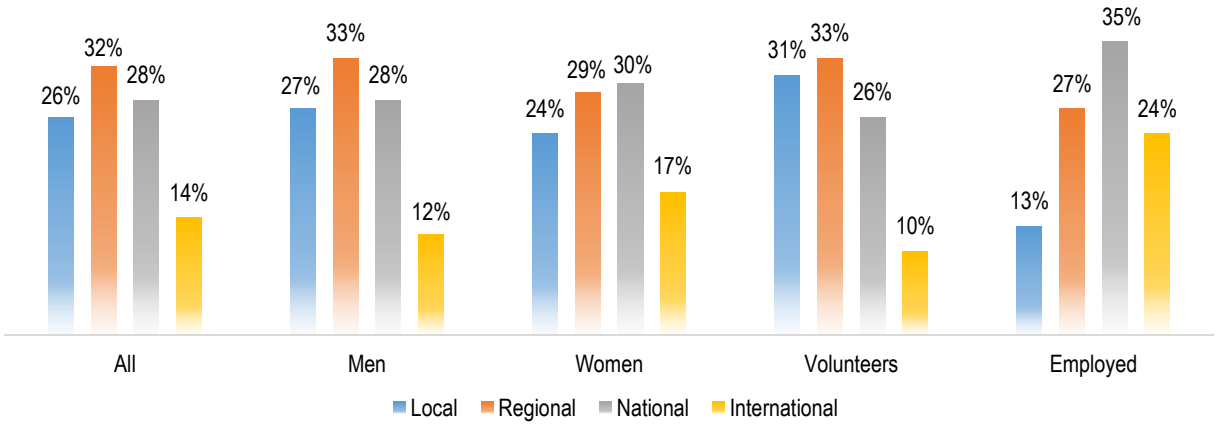
## Athletic Experience

Of the coaches surveyed, 64% was active in one or more sports during childhood, 76% played sports as youth, and 68% played sports as adults. Table 2 shows male and female coaches' participation in sports as athletes. The high percentage of active adults, plus the fact that only 1% of all coaches never played a sport supports that sports has been and continues to be a key activity in Norway's everyday life. Their competitive experience ranged from the local to the international level. Figures 6a and b show the competitive experience of men and women, volunteers and employed coaches.

*Table 2. Participation in sports as athletes themselves by gender*

| | Men | Women |
|---|---|---|
| Did not play sports | 1% | 1% |
| Active up to the age of 12 | 63% | 66% |
| Active between the ages of 13 and 19 | 76% | 78% |
| Active after the age of 20 | 72% | 57% |

*Figure 6. Highest levels of competitive experience by gender and involvement status*




Only 10% of the PROCON coaches have been members of a national team, 2% played sports as professionals, and 7% as semi-professionals. Figure 6 reveals that the employed coaches end to have more competitive experience at the national and international levels, while volunteer coaches tend to have more experience at the local and regional levels.

When asked if they had been coached by women and/or men, the coaches indicated that throughout their time as athletes, 60% had been coached only by men, 39% by men and women, and 2% only by women. These experiences may be linked to the low number of female coaches.

We asked the coaches if they had fulfilled their own aspirations as athletes. Of the respondents (n = 5617), 21% said that they had achieved their dreams and goals, 27% had not, and 52% had done so partially. Exploring the coaches' child and youth sport experiences and what they thought of these, majority indicated positive experiences. For example, 80% of the coaches reported that sport allowed them to be with their friends and to make new ones, which supports sports being an important social arena. The analyses showed that 72% did not dislike the pressure associated with participation in sports, for example from coaches, parents or peers, 78% were motivated by training, and 73% were motivated by competition. Table V in Appendix A lists all elements explored related to the coaches' past child and youth sport experiences.

## Entering Coaching

Individuals appear to enter coaching at different ages and for a variety of reasons. Some of them started their engagement with coaching as young as 7 years old, in the sports of gymnastics and swimming or as late as 50 to 60 years old in golf. As the Norwegian Sports Confederation (NIF) has a minimum age for training as a coach, our presentation of the data does not include the youngest coaches. This means that people who reported that they began coaching before the age of 15 (n = 336) are not included in Figures 7a, b, and c depicting the ages at which PROCON respondents started coaching. This group has been included in other analyses and descriptive data. As no in-depth information was collected on entry into coaching, more research on this is required, particularly for the group of coaches who reported entering coaching before the age of 15.

*Figure 7a. Ages of entry into coaching for all coaches by gender*

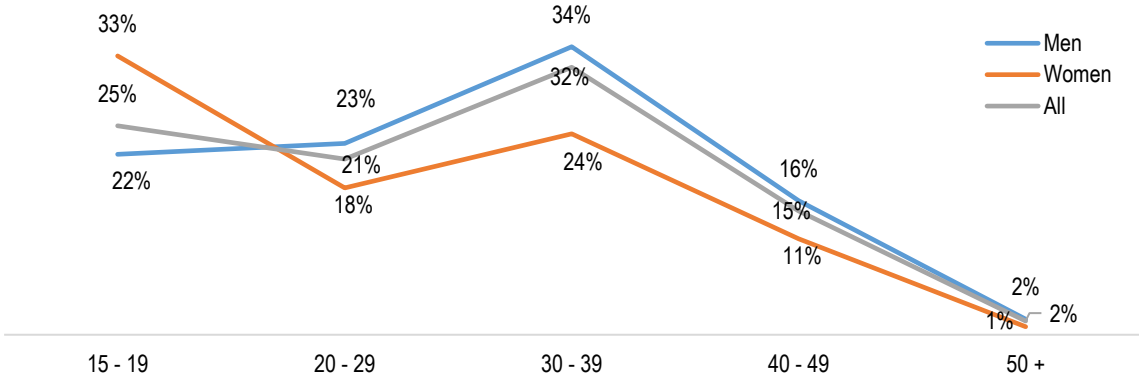



*Figure 7b. Ages of entry into coaching for volunteers coaches by gender*

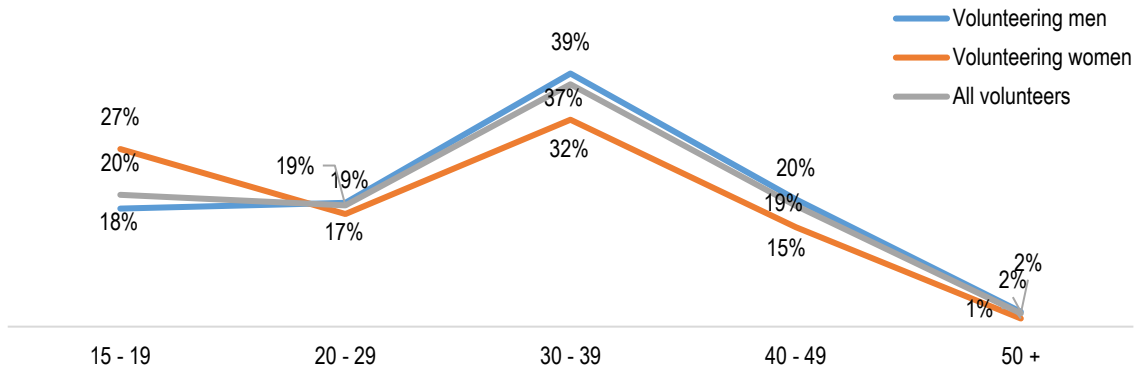
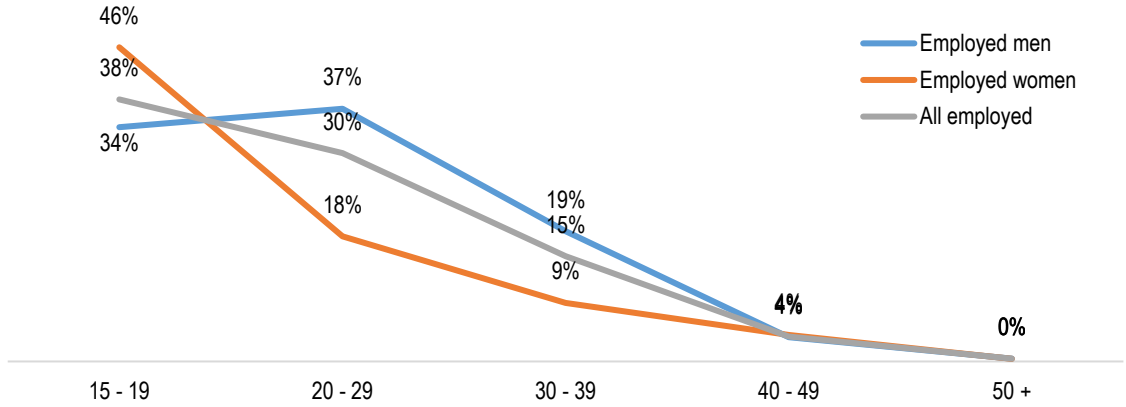



*Figure 7c. Ages of entry into coaching for employed coaches by gender*



Figures 7a, b, and c reveal that women coaches' peak entry is at the age group of 15 to 19 (33%) and men's peak entry is at the age group of 30 to 39 (34%). The entry points for volunteer coaches and employed coaches also differ. Women employed as coaches primarily enter at the age group of 15 to 19 (46%), while men enter in high numbers between the ages of 15 and 19 and 20 to 29 (34% and 37% of them, respectively). Men who volunteer primarily enter at the age group of 30 to 39 (39%), while women who volunteer primarily enter at the age groups of 15 to 19 (27%) or 30 to 39 (32%). Upon entering coaching, some were still active as athletes (38%); others had stopped training and competing (56%), while 1% had never been athletes.

To this day, nationally and internationally, we have limited knowledge on what attracts people to coaching. The top reason reported here is the desire "to contribute to athlete learning and development". Seventy-two percent consider this to be important or very important, and this is a motive that is seen among all coaches – regardless of gender and involvement status. This motive aligns seamlessly with the vision of Norwegian sports creating joy for all involved. Two other reasons that were reported to be important were being asked to coach by the federation, club, parents, coaches or others (62% reported that this was important or very important) and wanting to give back to their sport (51% reported that this was important or very important). It is also interesting to see what did not motivated them to start coaching. Overall, 87% reported that income was not a factor, 80% did not feel pressured by the federation, club or others, while for 50% pursuing a career as a coach was not a factor. However, there are some significant differences between involvement status groups in relation to the reason they began coaching. A higher number of employed coaches than volunteers reported income and pursuing a career as the reasons they started, while more volunteers than employed coaches reported their children starting playing sports and wanting to help as they reasons they started. Table VI lists all reasons explored related to why individuals start coaching (see Appendix A). Figures 8a and b using a scale from 1 to 5 depict the average score marked by the coaches regarding the top four reasons why men and women, volunteers and employed, start coaching.

*Figure 8a. Top four reasons for getting into coaching by gender*

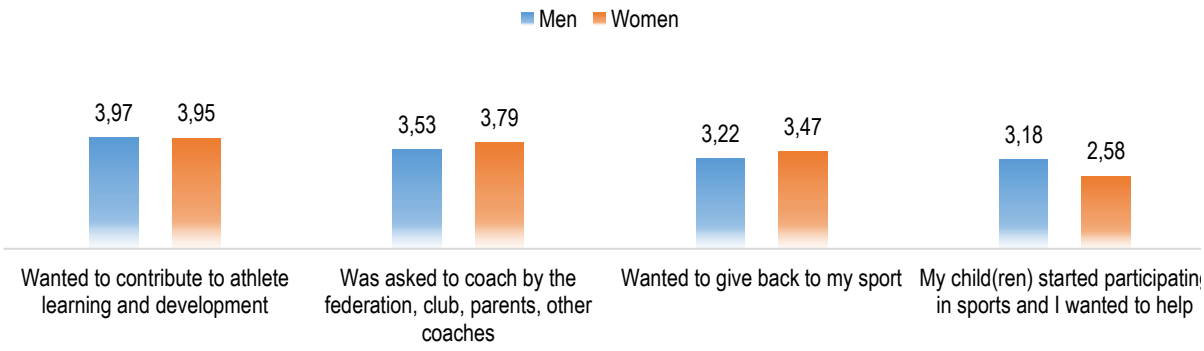
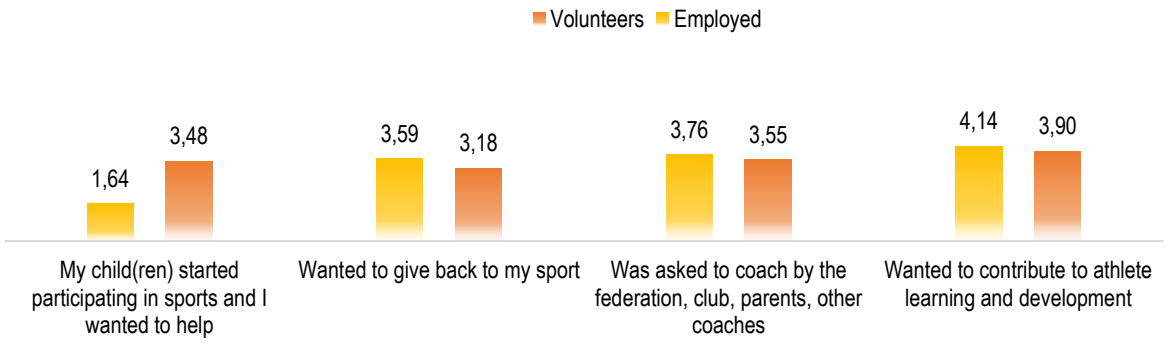
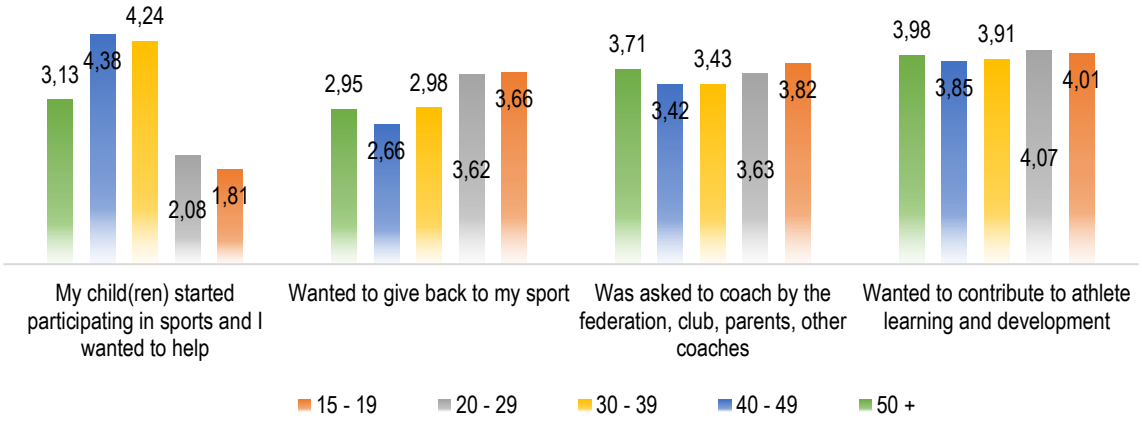



*Figure 8b. Top four reasons for getting into coaching by involvement status*



With regard to the age at which individuals start coaching, those who begin early (aged 15 to 19, 20 to 29) seem to enter coaching for reasons that are different from those who begin in mid-life years (aged 30 to 39, 40 to 49).Young coaches report a higher score than older coaches in wanting to give back to their sport. Older coaches are mainly parent coaches who volunteer to help their kids' sports. The reasons for entering coaching are otherwise distributed equally between age groups.

*Figure 9. Top four reasons for getting into coaching by age of entry*




## Coaching Experience

Coaches' experience varies, and extends from 0 to over 23 years in coaching. Among the coaches, 3285 (55%) reported that they never took a break in their coaching. Within this group, 41% have 0 to 5 years of consecutive experience, 27% have 6 to 10 years of experience, 21% have 11 to 22 years of experience, and 11% have 23 or more years of experience. The coaches who took a break in their coaching or were inactive at data collection also appear to have considerable experience, but it is difficult to provide an accurate picture for them, as we did not ask about the duration of their breaks.

In Figures 10a, b, and c, years of coaching experience are illustrated based on data from coaches without a break in their coaching. In the high experience groups, there are significantly more men than women, which reveals that male coaches have been active in coaching for longer. At the lower end of the scale (0 to 5 years), there are more women than men. This may suggest a few things, for example that more women have begun coaching recently and thus have not acquired extensive experience yet and/or that women exit from coaching before they acquire considerable experience. The data from women who have left coaching, which is presented later in this report, sheds some light on this matter.

*Figure 10a. Years of experience in coaching by gender for coaches with no career break (n = 3285)*

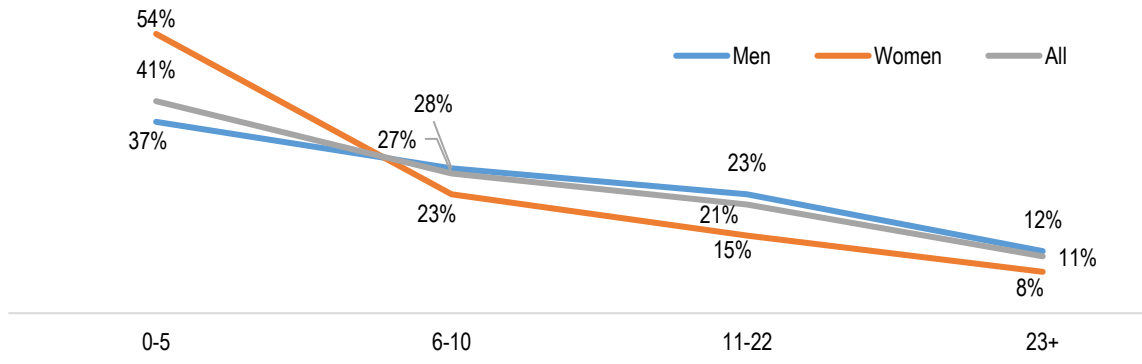


*Figure 10b. Years of experience in coaching for volunteers with no career break*

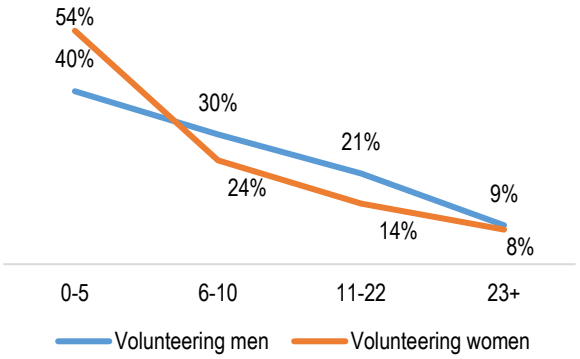
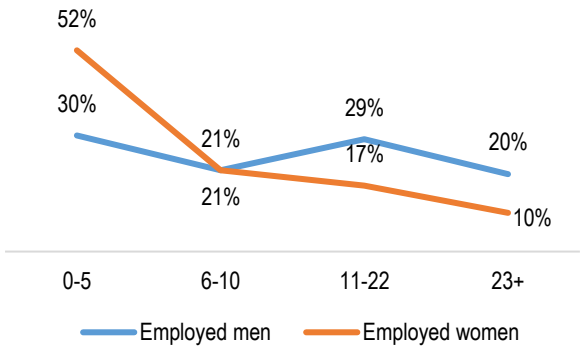



*Figure 10c. Years of experience in coaching for employed coaches with no career break*




If we look at years of coaching experience for volunteers (Figure 10b), the gender distribution is relatively similar. There is a higher percentage of women in the group with 0 to 5 years of experience, while beyond this point the percentage of men is higher in every age group. It is interesting to note that the numbers of men and women volunteer coaches in the group of 23 or more years of experience are similar. Looking at the experience of employed coaches in Figure 10c, there are 22% more women than men with 0 to 5 years of experience. This difference levels off in the group with 6 to 10 years of experience, while there are significantly more men in the groups with higher coaching experience (11 to 22 years and 23 years or more).

In the PROCON sample, coaching experience generally covers work with athletes of both genders (73%) and of different age groups and levels. Most of the experience comes from coaching children aged between 6 and 12 (83%) followed by coaching youth aged between 13 and 19 (71%). About all of the coaches surveyed (95%) have coached at the local level, very few internationally (6%), and even fewer have coached a national team (4%). Of the 251 respondents with experience in working with a national team, there are significantly more men (n = 213) than women (n = 38), and more employed (n = 179) than volunteer coaches (n = 72). Considering the experience in coaching a national team and the coaching certifications held (i.e., fewer at Level 3 and 4), the data may suggest that higher levels of coaching require more specialized knowledge and skills. Figures 11a and b show coaching experience when working with different age groups and levels of athletes.

*Figure 11a. Experience in coaching different ages*

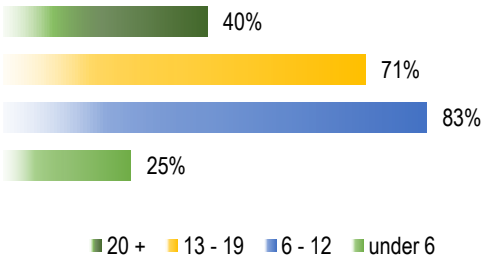
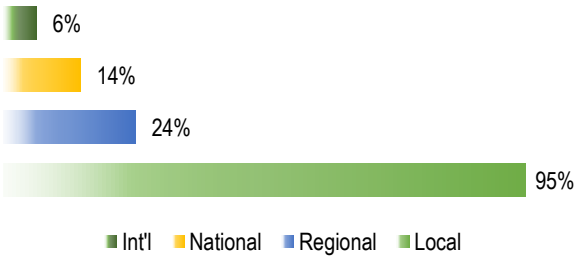



*Figure 11b. Experience in coaching different levels*




Tables 3a and b break down coaching experience in different age groups and levels for men and women, volunteers and employed coaches. Table 3a shows that more women than men appear to coach the younger athletes (under the age of 6, and 6 to 12), while more men coach athletes of older age groups (13 to 19, and over 20). In relation to their experience with coaching at different levels, 94% of men and 97% of women have experience from coaching at the local level, and much lesser at the regional, national and international sports, yet the decline in percentage is greater for women than it is for men. The fact that there are more men coaches with Trainer 2, 3 and 4

certifications (see Figure 4), offers an explanation to why more men coach older athletes and higher levels, where more specialized knowledge is required. This raises the question, why we see this trend, but this survey does not have the data to answer this question. Further research is required to answer this question, and to look at steps to be taken for increasing women's engagement in coaching older athletes and higher levels.

*Table 3a.* E*xperience in coaching athletes of different ages by gender*

| | ***under 6*** | ***6 – 12*** | ***13 – 19*** | ***20 and up*** |
|---|---|---|---|---|
| Men | 20% | 82% | 74% | 43% |
| Women | 37% | 87% | 64% | 34% |
| Volunteers | 23% | 86% | 66% | 34% |
| Employed | 31% | 74% | 87% | 61% |

*Table 3b.* E*xperience in coaching athletes of different level by involvement status*

| | ***Local*** | ***Regional*** | ***National*** | ***International*** |
|---|---|---|---|---|
| Men | 94% | 26% | 15% | 6% |
| Women | 97% | 19% | 10% | 5% |
| Volunteers | 97% | 17% | 7% | 3% |
| Employed | 88% | 45% | 33% | 16% |

Looking at the volunteer coaches, they appear to have extensive experience in coaching children at the local level. Parent coaches are an important part of children and youth sports, and training one's own and/or one's partner's children provides a strong motive to coach. Among the coaches who are married or in a cohabitation relationship with children, or single with children (n = 3651), 89% of men have experience as parent coaches and 85% of women.

Experience in coaching athletes with disabilities is limited to 12% of the PROCON respondents (n = 708), while at data collection time only 5% reported coaching athletes with disabilities. Majority of them are men (61%) and volunteers (60%). The average age of coaches with experience in coaching athletes with disabilities is 42, with an average experience of 17 years in coaching in general (we did not inquire how long they had coached athletes with disabilities in the questionnaire). They coach 74 different sports, overseen by 42 national federations (in order to protect the anonymity of the respondents, these are not reported in Appendix A due to the small sub-sample). Their experience in coaching athletes with disabilities is distributed as follows: 23% work with athletes with hearing impairments, 20% with vision impairments, 60% with mobility impairments, and 60% with mental impairments. Furthermore, 79% had coached athletes with disabilities at the local level, 18% at the regional level, 19% at the national level, and 13% at the international level. Considering that majority of these coaches have experience mostly with athletes with disabilities at the local level, one can ask whether these athletes and their coaches receive adequate opportunities and support to advance to a higher level. Overall, the data implies a need to give more coaches knowledge about facilitation of training for athletes with disabilities.

## Current State of Coaching

How individuals got their coaching position offers key understanding of the pathways for volunteer and employed coaches, especially with regard to gender as illustrated in Figures 12a and b. Among the 4483 volunteer coaches, 52% had been asked to take on the role (39% were asked to volunteer, while 13% were offered the role), while 46% volunteered themselves, and 2% entered coaching by a different mean of these we asked about. Out of the 52% of those who had been asked to take on a coaching role, 39% were men and 13% were women. Looking at the employed coaches, the most common pathway to employment as a coach is to be offered the job (73%). This primarily applies to the age groups of 20 to 29 (21%) and 40 to 49 (19%). Among the employed coaches, significantly fewer women (24%) than men (49%) were offered a coaching job, which may indicate a skewed view

of women in the coaching community as well as decrease opportunities in the recruitment process for women. Considering also the finding that at the time of data collection fewer women were asked to volunteer coaches and fewer women indeed volunteered, we question whether stereotypical gender roles and family structures are the underlying causes that keep women out of coaching. All this require further research in order to yield evidence-based answers.

*Figure 12a. Pathway to current volunteer position by gender*

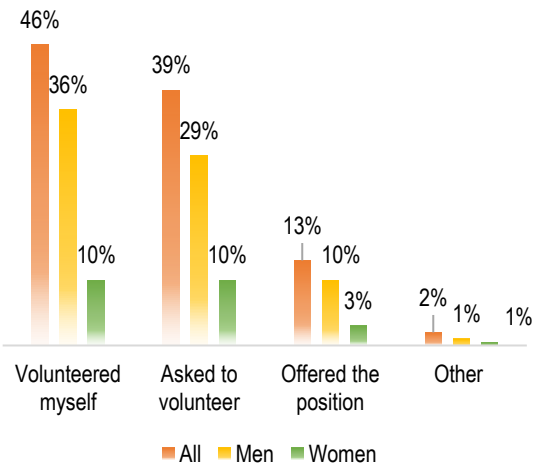



*Figure 12b. Pathway to current employed position by gender*

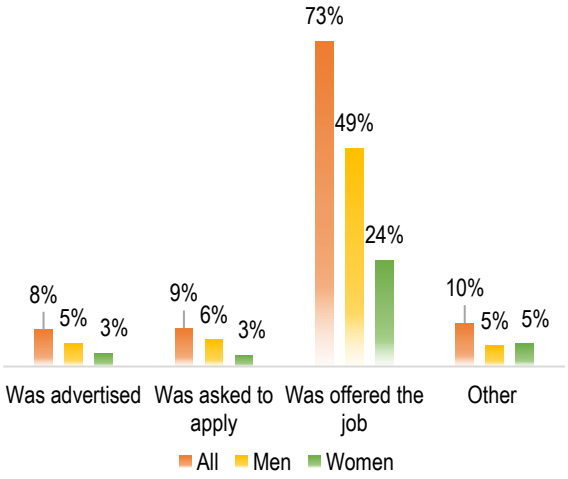



Figure 13a shows that with regard to volunteers, it is the age group of 40 to 49 who mostly volunteers or is asked to volunteer. Figure 13b shows that with regard to employed coaches, jobs are offered predominantly to the age groups of 20 to 29 and 40 to 49, without the position having been advertised or them having applied for a vacancy.

*Figure 13a. Pathway into current volunteer position by age*

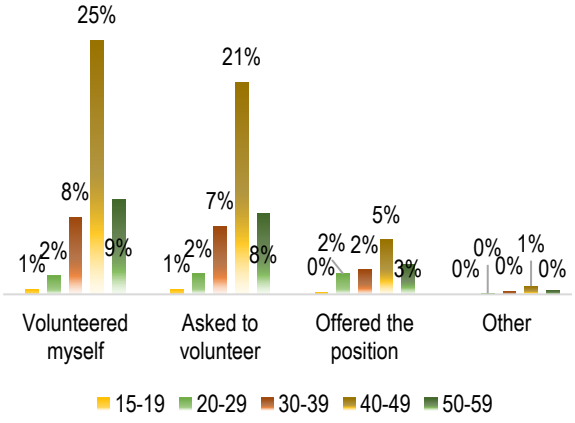



*Figure 13b. Pathway into current employed position by age*

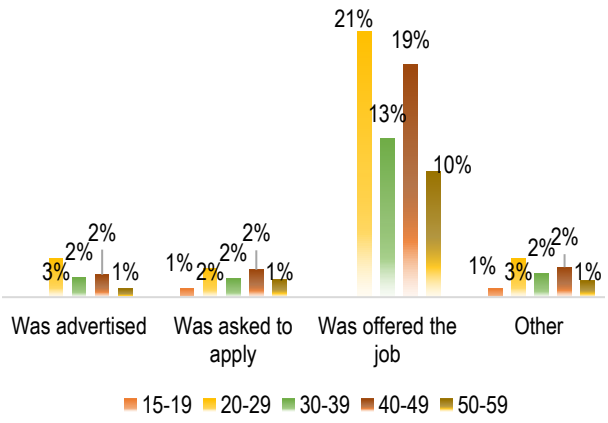



Figure 14 shows how coaches describe their current coaching role. Forty-eight percent of the respondents reported being head coaches with assistants. There are significant differences for gender and involvement status. Fifty-percent of men and 43% of women work as head coaches with assistants, while 15% of men and 19% of women work as head coaches without assistants. Seventy percent of the employed coaches and 62% of the volunteer coaches work as head coaches (with and without assistants), while more of the volunteers (26%) work as assistant coaches than of the employed coaches (16%). This might be explained by volunteers coaching predominantly children and youth locally (Figures 11a and b). The differences between men and women may indicate that women

are more engaged in children's sports at the local level, which is often based on volunteer work, and where assistant coaches are not a priority.

*Figure 14. Primary roles served by the PROCON coaches*

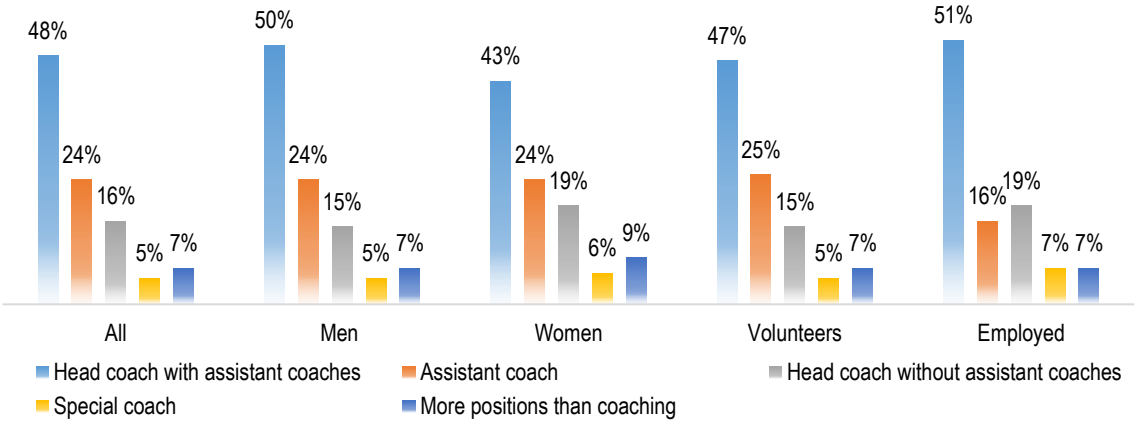



Table 4 presents other roles held by employed and volunteer coaches within their sports communities. More women (61%) than men (56%) take on administrative roles, while more men (15%) than women (7%) take on leadership roles or positions of trust in the club.

*Table 4. Roles other than coaching held by the PROCON coaches*

| | ***All*** | ***Men*** | ***Women*** | ***Volunteers*** | ***Employed*** |
|---|---|---|---|---|---|
| Administrative, representative | 57% | 56% | 61% | 62% | 42% |
| Sports director, committee member, coach coordinator, player developer | 13% | 15% | 7% | 12% | 15% |
| Sports-related tasks | 11% | 11% | 12% | 8% | 24% |
| Team leader | 11% | 11% | 9% | 12% | 5% |
| Refereeing | 4% | 3% | 7% | 4% | 5% |
| Coach supervisor, supervisor, coach educator | 3% | 3% | 3% | 2% | 9% |
| Other | 1% | 1% | 1% | 1% | 1% |

In order to gain an insight into the core mission and objectives of the surveyed coaches, we asked them to identify the single most important factor in their work with athletes and teams. Their responses are presented in Table 5. Most coaches reported that developing sports skills and mastery was their primary objective. This was particularly clear among women and employed coaches, compared to men and volunteers.

*Table 5. The principal objective of coaches' work with athletes/teams by gender and involvement status*

| | ***All*** | ***Men*** | ***Women*** | ***Volunteers*** | ***Employed*** |
|---|---|---|---|---|---|
| Develop athlete skills and mastery | 19% | 18% | 22% | 17% | 24% |
| Promote inclusion, unity, belonging, social networking | 19% | 19% | 18% | 21% | 13% |
| Promote enjoyment and good experiences | 16% | 15% | 20% | 17% | 12% |
| Produce results | 14% | 15% | 9% | 11% | 21% |
| Prepare the setting, facilitate activity | 13% | 14% | 12% | 14% | 11% |
| Instill motivation, inspire development and training | 12% | 12% | 14% | 13% | 10% |
| Promote sports values and develop athlete as person | 7% | 9% | 5% | 7% | 9% |

Expectations regarding athletic development and results can be identified in many ways, and may come from many sources. They can come from the coach alone or the sport environment (for example the athletes, parents or the club), or it can be identified as a collaboration between the coach and the environment. Sometimes the involved entities agree and other times disagree, creating tension and conflict; in some cases leading the coach to change job and in extreme cases to quit coaching. We asked if the coaches experience any mismatch between their work and the sport environment's expectations. According to the answers received, the vast majority (83%) perceived a smooth alignment. In the case of mismatches (17%), the most common reason was conflicts with the parents of the athletes (5%), and less with the club/federation (3%) or the athletes themselves (2%). Topics of mismatch revolved around issues such as team selection, athlete development (long-term and short-term), delivery of training, event planning, planning of training and competition, athlete recruitment, and results.

We also asked the PROCON participants if they could see by a certain age that an athlete can become exceptionally good in the sport. Eighteen percent of them believe talent can be identified by the age of 12, while 56% believe it can be identified between the ages of 13 and 19. Six percent believe they can see talent after the age of 20, while 20% of all coaches believe that talent cannot be seen at any particular age. Differences exist between men and women, as well as volunteers and the employed. For example, more women (23%) and employed coaches (20%) think that talent can be seen before the age of 12 than men (16%) and volunteers (17%). These findings are especially important since child and youth sport are critical periods for the athletes, both from a developmental and social perspective, considering that there appears to be a link between how coaches assess athlete skills (talent) and the sport climate established. It must be noted that the data presented here only provides an indication of how coaches evaluate sports skills, and when they believe they can foresee athlete potential. More research is necessary to see if their evaluations are correct as well as how a coach's perception of talent impacts athlete development and learning. Figures 15a and b illustrate the age groups in which coaches believe that they can see when an athlete can become exceptionally good in their sport.

*Figure 15a. Approximate athlete age when a coach can pick out that the athlete can become exceptional good in the sport by gender*

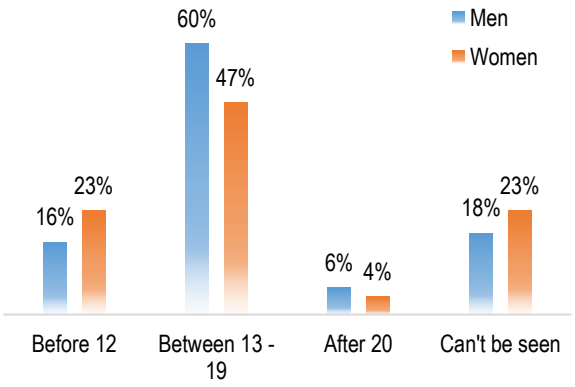
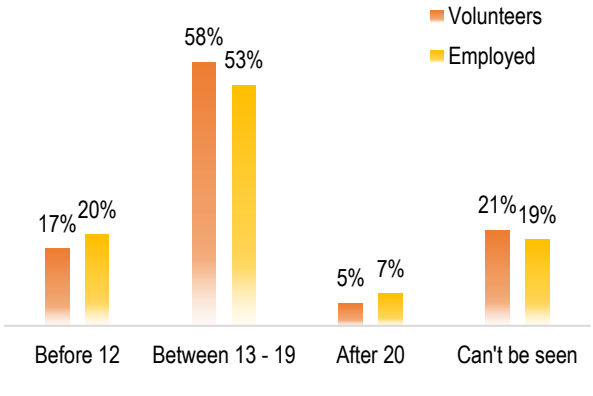



*Figure 15b. Approximate athlete age when a coach can pick out that the athlete can become exceptional good in the sport by involvement status*




Looking at the surveyed coaches' terms of employment, 24% report that they have a verbal contract, 33% have a written contract, and 43% work without a contract. It is no surprise that more of the employed coaches (95%) than the volunteer coaches (44%) had a verbal or written contract. It is positive that so many of the employed coaches report that they have a contract, even though steps should be taken for this to be true of all. Contracts regulate matters related to pay and compensation, but can also cover other matters, relevant to the large group of coaches working without contract (n = 2507) -- regardless of the status as volunteers or employed. Examples of this can be matters of ethics or the development of the sport within the club. Clear and transparent terms of employment or volunteering can further professionalize the occupation of coaching, by alleviating some of the insecurities that go with it. The overall data also shows that more men work without a contract (47%) than women (34%), which is due to the low number of women in the sample in general and the sub-groups of employed and volunteer coaches. If

we look at employed coaches alone, more women than men work without a contract (7% and 4% respectively). With regard to payment for coaching, 56% of coaches do not receive anything, while 28% receive a salary/fee/bonus, expenses for 10% of them are reimbursed (e.g., rent, car, sportswear, equipment, travel expenses) and 6% have some other type of arrangement. Figures 16a and b illustrate the differences between the genders in contracts and payment.

*Figure 16a. Contracts in the last year by gender*

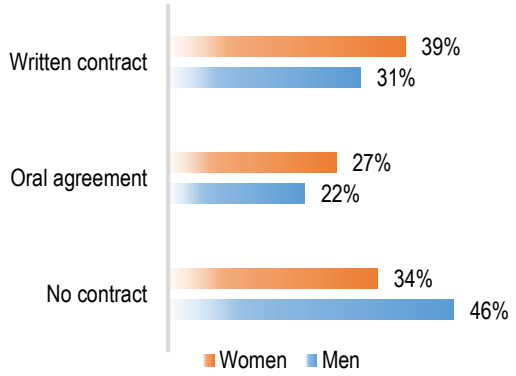
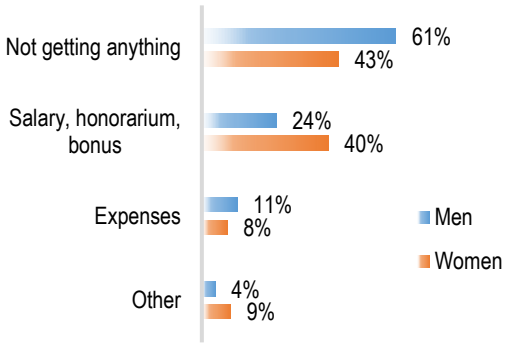



*Figure 16b. Compensation in the last year by gender*




At the time of data collection, as mentioned earlier, 93% of the coaches were working with athletes under the age of 19, for whom safety and ethics ought to be issues of priority. These coaches were asked whether they had been informed about ethical guidelines in general, not specifically for the ethical guidelines developed by NIF or a national federation. Thirty-three percent had been informed about ethical guidelines in writing, 19% was informed orally in detail, 24% was briefly informed orally, while 24% never received any information about ethical guidelines. Of the coaches who had seen the guidelines in writing, 50% were asked to sign them. The data shows that the majority of coaches had been made aware of ethical guidelines in some form or other (76%). The findings nevertheless show that more work needs to be done to increase the awareness of coaches of their responsibilities towards their athletes and the guidelines that apply in their sport. NIF has developed guidelines for athletes, coaches, managers and employees; guidelines that specifically target discrimination and sexual harassment, use of alcohol, data processing, etc.. These guidelines are preventive measures, designed to provide good and safe sport environments. Figures 17a and b show how ethical guidelines are communicated, by gender and involvement status. There are significant differences; fewer women and volunteers were informed of the ethical guidelines than men and employed coaches.

*Figure 17a. Ethical guidelines awareness by gender*

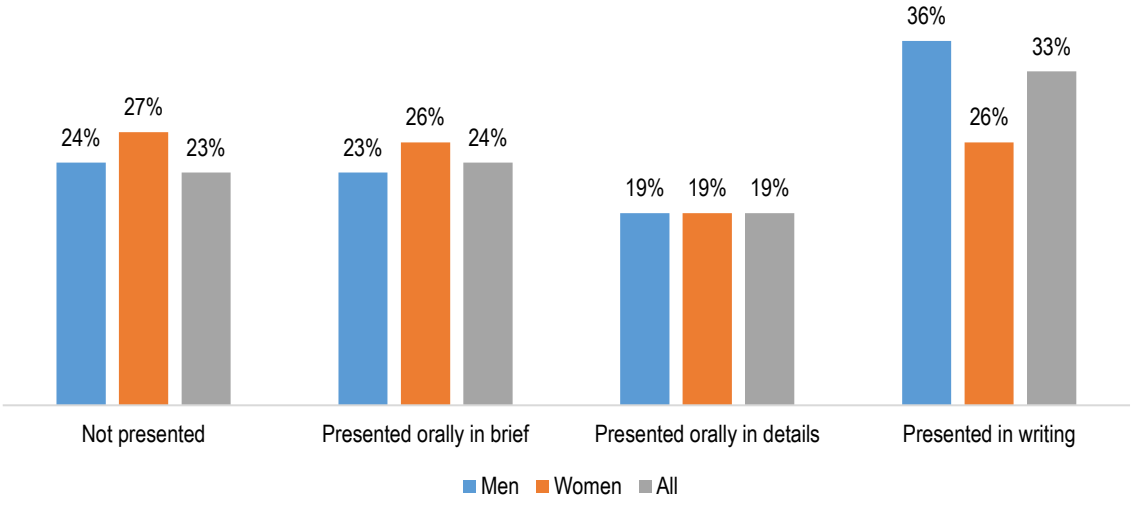
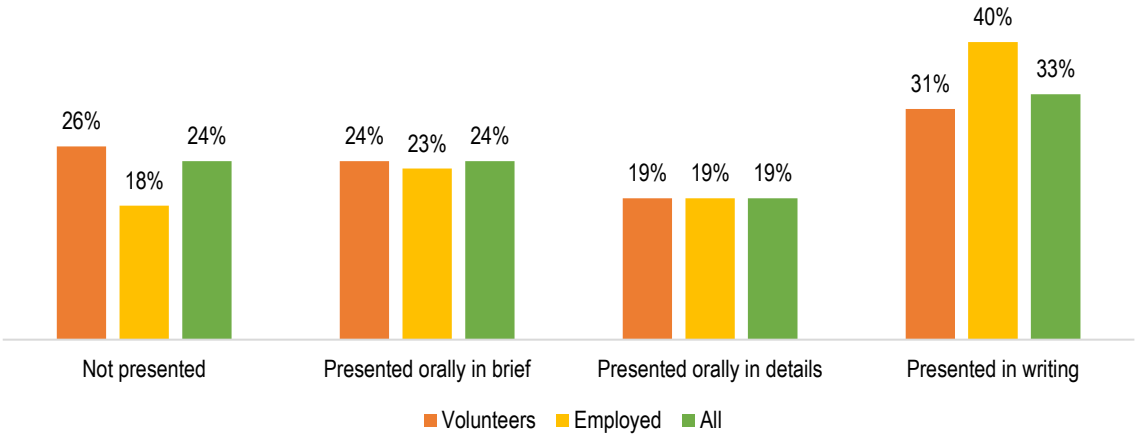


*Figure 17b. Ethical guidelines awareness by involvement status*




Among the 5540 coaches who were working with athletes under the age of 19, at data collection, 84% had to undergo a criminal record check when they began coaching. This means that 16% (n = 890) of coaches working with athletes under the age of 19 did so without having undergone the criminal record check. Significantly more men (83%) than women (79%) were asked to undergo such a check when starting at current position, while there was no difference between volunteers (82%) and the employed (81%). Among the coaches who were responsible for athletes with disabilities (n = 291), 86% had undergone a criminal record check. Pursuant to NIF rules, criminal record checks are required for coaches who are working with minors and athletes with mental impairments.

## Coach Wellbeing

We explored different aspects of coaching and life that may positively and/or negatively influence the wellbeing of the coaches. On a scale from 1 to 5, where 1 marks "very negative impact" and 5 a "very positive impact", the coaches responded on an array of sports, family, life, and work-related factors. If they had not experienced what they were asked about, they answered "have no experience". Majority of the coaches scored above the middle score of 3 on most factors, implying that these had a more positive impact on their wellbeing rather than a negative one. Relationships within the sports community (with athletes, parents and other coaches), own skills and experience and the athlete's performance are the three factors that have the highest positive impact on coach wellbeing. Table 6 presents the average scores and how much these deviated (i.e., means and standard deviations) on all factors we asked the coaches about.

Table 6. *Average scores (and standard deviations in parentheses) of factors with an impact on coach wellbeing by gender and involvement status -- asterisks mark the high score where significant differences were computed*

| | ***All*** | ***Men*** | ***Women*** | ***Volunteers*** | ***Employed*** |
|---|---|---|---|---|---|
| Relationships with athletes, parents, co-coaches, club, etc. | 4.23(0.82) | 4.23(0.83) | 4.23(0.80) | 4.23(0.82) | 4.22(0.83) |
| Level of own skills, experience | 4.04(0.84) | 4.02(0.84) | 4.09(0.86)* | 3.96(0.86) | 4.28(0.75)* |
| Level of athlete performance | 4.02(0.79) | 4.04(0.78)* | 3.97(0.79) | 4.01(0.78) | 4.07(0.81)* |
| Understanding, support from family | 3.88(0.91) | 3.85(0.93) | 3.97(0.85)* | 3.88(0.89) | 3.86(0.99) |
| Level of health (no sickness, injury) | 3.80(0.90) | 3.82(0.87) | 3.77(0.98) | 3.81(0.87) | 3.77(0.98) |
| Coaching work load | 3.31(0.91) | 3.31(0.92) | 3.32(0.90) | 3.31(0.89) | 3.32(0.97) |
| Relationship with media | 3.25(0.65) | 3.27(0.65)* | 3.19(0.65) | 3.22(0.60) | 3.33(0.75)* |
| Pressure for results | 3.24(0.77) | 3.30(0.77)* | 3.06(0.74) | 3.21(0.74) | 3.30(0.85)* |
| Working voluntarily, not getting paid | 3.17(0.86) | 3.18(0.87) | 3.13(0.83) | 3.23(0.86)* | 2.86(0.79) |

| | | | | | |
|---|---|---|---|---|---|
| Work-life balance | 3.16(1.03) | 3.13(1.03) | 3.26(1.04)* | 3.17(1.00) | 3.14(1.12) |
| Process of team selection/deselection | 3.13(0.83) | 3.16(0.84)* | 3.03(0.79) | 3.12(0.81) | 3.16(0.90) |
| Politics of club, team, federation | 3.11(1.04) | 3.08(1.03) | 3.21(1.08)* | 3.12(1.02) | 3.09(1.12) |
| Travelling, administration workload | 3.11(0.86) | 3.09(0.86) | 3.20(0.85)* | 3.10(0.82) | 3.16(0.96)* |
| Insecurity of this job | 3.00(0.73) | 3.04(0.73)* | 2.88(0.72) | 3.06(0.68)* | 2.84(0.83) |
| Salary and compensation | 2.98(0.84) | 2.92(0.81) | 3.13(0.88)* | 2.86(0.74) | 3.24(0.96)* |
| Challenges/stressors outside coaching | 2.95(0.73) | 2.99(0.72)* | 2.82(0.72) | 2.95(.070) | 2.94(0.80) |
| Loneliness in the job | 2.86(0.81) | 2.88(0.81)* | 2.82(0.79) | 2.88(0.78)* | 2.81(0.87) |

Significant differences were found between men and women as well as volunteers and employed coaches in some of the factors. Employed coaches' wellbeing is impacted by the level of own skills and experience as well as athlete performance more than the volunteers. Table 6 shows that the wellbeing of men coaches is affected more by athlete performance levels than women coaches, while the level of own skills and experience is impacting women more than men. Looking at the lowest average scores, it is important to note that over 20% of the coaches had never experienced an insecure work situation, nor issues with their salary/compensation and relationships with the media. At the same time, the data shows that many coaches experience challenges associated with individual factors. For example, 30% of coaches finds that the work-life balance has a negative impact on their wellbeing, while 28% has a negative view of how their club/team/federation is led and organized, 23% feels lonely in their job, and 19% experiences stressors outside coaching.

## Coach Education and Advancement

We asked all coaches about the value they see in gaining more education, competencies and skills. The underlying notion was that if coaches see value in education they will pursue it. On a scale from 1 to 5 ranging from "no value at all" to "the highest value", 58% of the coaches see the highest value in gaining more sport coaching education, competencies and skills; 31% see a lot of value; 9% somewhat of a value; and only 2% see little and no value. These findings are promising for strengthening the knowledge base of the sports coaches and for educating the 24% of coaches who coach without any training or education. It is of note that women and employed coaches see the highest value in gaining education. These findings for women and employed may indicate that gaining sport specific education and competencies is viewed as a necessity in order to develop and advance in coaching. Figures 18a and b illustrate the value of gaining further coaching education, competencies and skills for men and women, volunteers and employed coaches.

*Figure 18a. Perceived value in gaining education, competencies and skills by gender*

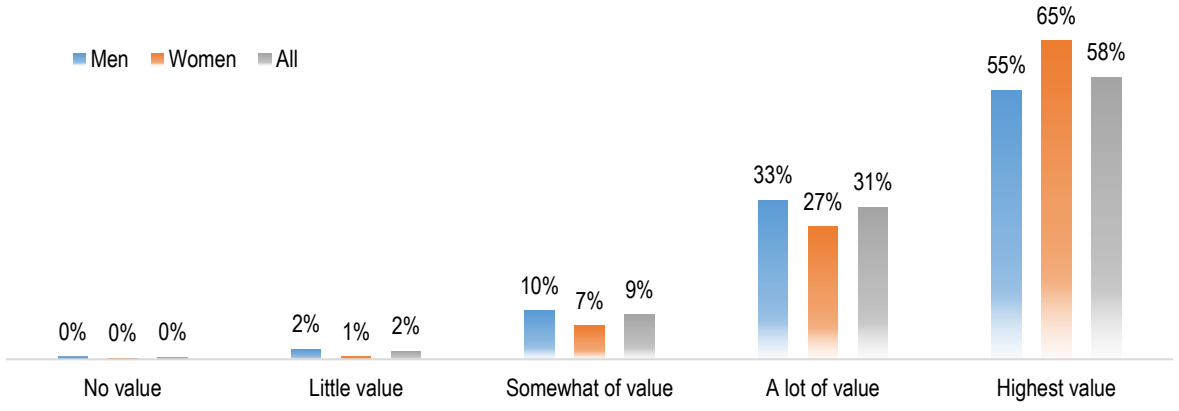
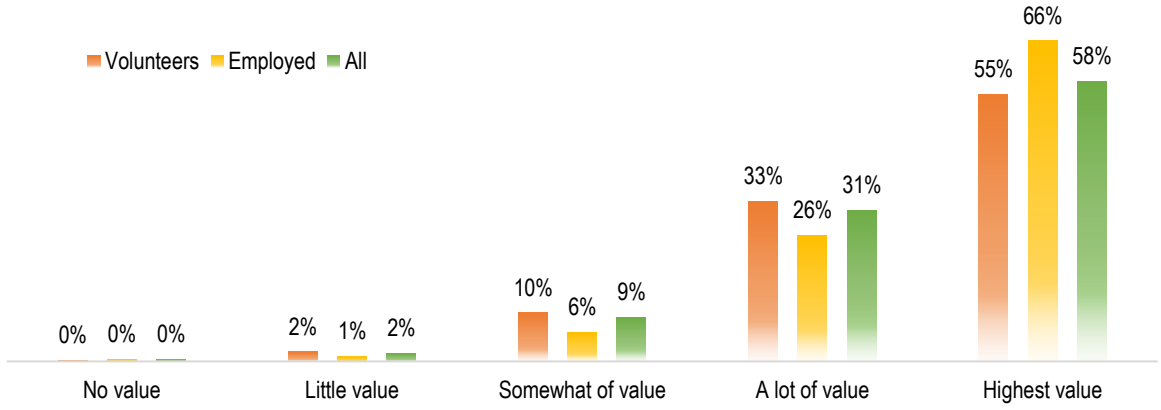


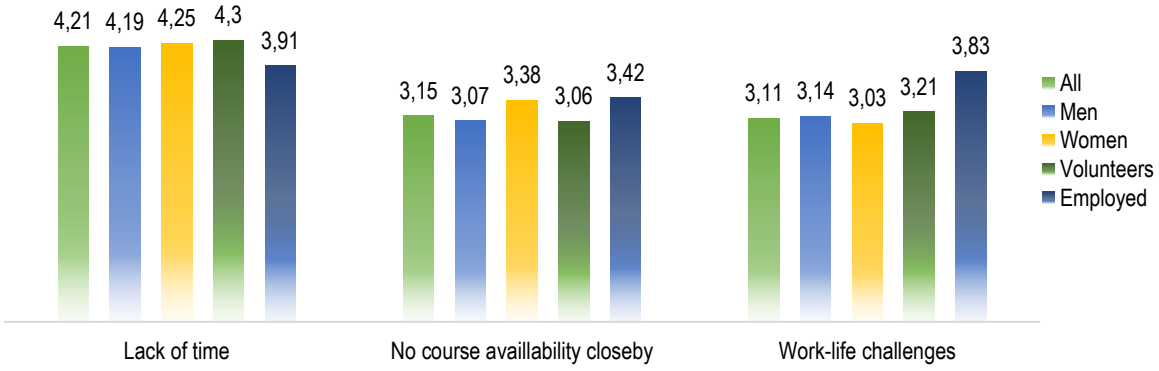
*Figure 18b. Perceived value in gaining education, competencies and skills by involvement status*




While gaining sport coaching education, competencies, and skills is of high value to the majority of coaches, they often experience obstacles in getting it. Over half of the coaches (58%) reported facing obstacles, with lack of time being the obstacle reported by most of them (54%), followed by lack of available courses (46%), and work-life balance challenges (45%). Not qualifying to participate in educational opportunities (20%) and club/team politics (24%) were on the lower end of experienced barriers. We asked about a number of obstacles experienced and the responses are presented in detail in Table VII (see Appendix A).

Better knowledge of experienced barriers and challenges can be of help to education course and program organizers, for developing courses that are attractive with regard to implementation and content. Figure 19, shows the top 3 obstacles faced by the surveyed coaches, according to gender and involvement status. For these three obstacles, men and women, volunteers and employees had an average score higher than the middle score of 3, using a scale of 1 to 5, with 1 marking “not an obstacle for me” and 5 marking “a strong obstacle for me”.

*Figure 19. Top three obstacles in getting further education by gender and involvement status*




For all coaches, lack of time as the greatest obstacle. Employed coaches reported a higher average score than the other subgroups in struggling to balance work and life. Other factors not included in the closed-ended questions, but reported by some coaches as obstacles in gaining further education in open-ended responses, were old age and not being selected for educational opportunities due to priority given to retired elite athletes. While age discrimination requires no further comment considering its wrongfulness, deselection due to priority given to retired athletes deserves future attention.

When asked about the areas in which the coaches want more knowledge, competencies and/or skills, sports-specific areas (e.g., technique, tactics, equipment or technology) appear to be of most interest. Table 7 presents the rank order of these areas of knowledge, competencies and/or skills according to the average score computed for all coaches (i.e., means). An asterisk indicates a significant difference between subgroups and the standard

deviation of each mean is presented in the parentheses. The answers were given on a scale from 1 to 5, with 1 marking "not interested" and 5 marking "strongly interested". Nine of the 13 areas attracted scores higher than the middle score of 3, revealing a high interest in more knowledge, competencies and/or skills in most areas.

*Table 7. Thematic areas coaches wish to improve their education by gender and involvement status*

| | ***All*** | ***Men*** | ***Women*** | ***Volunteers*** | ***Employed*** |
|---|---|---|---|---|---|
| Sport specifics | 4.26(0.95) | 4.24(0.94) | 4.30(0.99) | 4.19(0.97) | 4.48(0.87)* |
| Planning of training and competition | 3.92(1.10) | 3.96(1.05)* | 3.82(1.24) | 3.85(1.11) | 4.15(1.05)* |
| Leadership and communication | 3.79(1.14) | 3.78(1.12) | 3.82(1.20)* | 3.69(1.14) | 4.11(1.05)* |
| Sport psychology, pedagogy, didactics | 3.71(1.18) | 3.67(1.17) | 3.82(1.22) | 3.59(1.18) | 4.09(1.08)* |
| Code of conduct, bullying, harassment | 3.60(1.21) | 3.58(1.21) | 3.67(1.24) | 3.58(1.21) | 3.65(1.22) |
| Fair play, ethics, morality | 3.42(1.23) | 3.39(1.21) | 3.51(1.30)* | 3.40(1.24) | 3.48(1.23) |
| Health and life-style | 3.33(1.15) | 3.28(1.12) | 3.47(1.23)* | 3.26(1.16) | 3.55(1.11) |
| Physiology, anatomy, biomechanics | 3.31(1.23) | 3.29(1.19) | 3.36(1.32)* | 3.21(1.22) | 3.62(1.18) |
| Nutrition and hydration | 3.31(1.16) | 3.30(1.13) | 3.34(1.24)* | 3.23(1.16) | 3.57(1.13) |
| Management | 2.58(1.33) | 2.58(1.32) | 2.60(1.34) | 2.45(1.29) | 2.99(1.35) |
| Planning of events | 2.45(1.23) | 2.41(1.20) | 2.58(1.29)* | 2.36(1.19) | 2.74(1.28)* |
| Finances and business matters | 2.19(1.16) | 2.18(1.15) | 2.22(1.20)* | 2.07(1.11) | 2.56(1.25)* |
| How media works | 2.08(1.18) | 2.08(1.18) | 2.08(1.19) | 1.92(1.10) | 2.56(1.28)* |

Women report a stronger interest than men in improving their knowledge, competencies and/or skills in a number of areas that cover different aspects of coaching practice (e.g., leadership and communication, fair play, ethics and morality, physiology, anatomy and biomechanics). Men report a higher interest than women in learning more about short and long-term training and competition planning. Employed coaches appear to show the strongest interest in all of the thematic areas explored, which may indicate a desire to further improve in the job across all areas of knowledge, while it can also indicate that they have more time to improve within the frame of their work hours.

Looking at the ages of the coaches, those in the age group of 20 to 29 show the strongest interest in developing their knowledge, competencies and/or skills as coaches (see Table 8). This age group includes more employed coaches than volunteers, and is the age group where perhaps a number of individuals aspires a career in coaching, thus wants to advance knowledge level. Notably and understandably, on matters of ethics, health and lifestyle, and management the youngest coaches, those aged 15 to 29, are the most interested in the topics; while all age groups appear to have a high interest in these. Table 8 shows how coaches of different age groups responded in relation to the areas in which they perceive a need to advance their knowledge, competencies and/or skills. The responses were given on a scale from 1 to 5, where 1 marked "not interested" and 5 marked "strongly interested" and Table 8 summarizes their answers by the use of means and standard deviations. Coaching education developers should look closely to these findings when deciding on the content of seminars, workshops, forums and courses.

*Table 8. Thematic areas coaches wish to improve their education by age groups*

| | ***15-19*** | ***20-29*** | ***30-39*** | ***40-49*** | ***50-59*** | ***Over 60*** |
|---|---|---|---|---|---|---|
| Sport specifics | 4.32(0.99) | 4.58(0.79) | 4.30(0.93) | 4.23(0.95) | 4.14(0.10) | 4.01(1.10) |
| Planning of training and competition | 3.96(1.23) | 4.28(0.96) | 3.96(1.11) | 3.92(1.08) | 3.75(1.11) | 3.52(1.30) |
| Leadership and communication | 3.84(1.21) | 4.21(1.02) | 3.88(1.16) | 3.71(1.13) | 3.66(1.11) | 3.66(1.19) |
| Sport psychology, pedagogy, didactics | 3.67(1.29) | 4.23(0.10) | 3.74(1.20) | 3.64(1.17) | 3.56(1.18) | 3.59(1.17) |
| Code of conduct, bullying, harassment | 3.79(1.30) | 3.70(1.24) | 3.60(1.21) | 3.56(1.21) | 3.58(1.19) | 3.74(1.22) |
| Health and life-style | 3.60(1.23) | 3.58(1.16) | 3.28(1.18) | 3.27(1.15) | 3.32(1.08) | 3.43(1.08) |
| Nutrition and hydration | 3.27(1.32) | 3.60(1.14) | 3.22(1.21) | 3.26(1.16) | 3.34(1.09) | 3.36(1.06) |
| Physiology, anatomy, biomechanics | 3.15(1.36) | 3.67(1.22) | 3.27(1.24) | 3.26(1.22) | 3.28(1.18) | 3.19(1.16) |
| Management | 2.95(1.40) | 3.18(1.41) | 2.65(1.33) | 2.40(1.27) | 2.49(1.25) | 2.90(1.32) |
| Planning of events | 2.90(1.37) | 2.88(1.36) | 2.46(1.23) | 2.32(1.17) | 2.40(1.14) | 2.72(1.24) |

| | | | | | | |
|---|---|---|---|---|---|---|
| Fair play, ethics, morality | 3.68(1.33) | 3.57(1.25) | 3.36(1.25) | 3.39(1.22) | 3.41(1.21) | 3.50(1.25) |
| Finances and business matters | 2.55(1.34) | 2.67(1.36) | 2.19(1.17) | 2.06(1.09) | 2.09(1.07) | 2.55(1.16) |
| How media works | 2.42(1.28) | 2.59(1.38) | 2.05(1.20) | 1.91(1.09) | 2.07(1.08) | 2.55(1.29) |

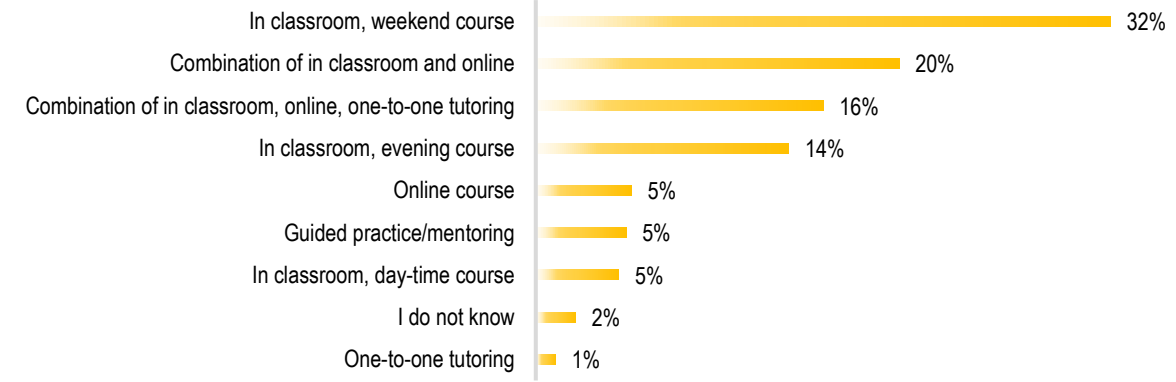
We also asked the coaches how they prefer to learn and what sources of learning developed their knowledge, competencies and/or skills, as well as how much these impact on them as coaches in the past. The responses were given using a scale from 1 to 5, where 1 marked "did not impact at all" and 5 marked "impacted very much". They identified feedback from their athletes, working with/observing other coaches, and reflection on oneself and other coaches' practices as the most impactful sources. Means of more traditional education (e.g., classes, seminars), mentoring and web-based learning sources scored lower. It should be noted that these findings have focused on learner-reported preferences (the coach) and have not been correlated with coaching effectiveness or impact to demonstrate the types of learning that develop the most effective coaches or have the greatest positive impact on the learning and development of athletes. Table 9 presents a rank order based on all coaches' average scores for the impact of different sources of education on them (in parentheses the standard deviation from the mean is also presented). An asterisk indicates a significant difference.

*Table 9. Learning sources with a perceived impact on coaching by gender and involvement status*

| | ***All*** | ***Men*** | ***Women*** | ***Volunteer*** | ***Employed*** |
|---|---|---|---|---|---|
| Feedback I receive from athletes/players | 3.85(0.98) | 3.81(0.97) | 3.96(1.01) | 3.77(1.00) | 4.09(0.90)* |
| Working with or observing other coaches | 3.82(1.04) | 3.78(1.02) | 3.94(1.09) | 3.74(1.06) | 4.06(0.94)* |
| Reflection on own and others coaching practice | 3.81(0.98) | 3.80(0.96) | 3.84(1.05)* | 3.73(0.98) | 4.05(0.95)* |
| Testing and experimenting with own ideas | 3.73(1.03) | 3.74(1.01)* | 3.71(1.09) | 3.61(1.04) | 4.11(1.920* |
| Traditional education | 3.48(1.26) | 3.41(1.25) | 3.66(1.29) | 3.41(1.28) | 3.68(1.19)* |
| Material I read | 3.00(1.23) | 3.00(1.22)* | 2.97(1.27) | 2.91(1.22) | 3.25(1.24)* |
| Seminars, workshops, conferences | 2.91(1.37) | 2.82(1.33) | 3.18(1.45)* | 2.77(1.38) | 3.33(1.25)* |
| Working with supervisor, mentor, coach's coach | 2.90(1.47) | 2.88(1.45) | 2.96(1.55)* | 2.70(1.46) | 3.47(1.37)* |
| Social media | 2.58(1.26) | 2.55(1.24) | 2.68(1.32)* | 2.56(1.26) | 2.67(1.25) |
| Sport-specific web pages | 2.57(1.25) | 2.51(1.22) | 2.75(1.34)* | 2.56(1.26) | 2.61(1.22)* |
| Electronic media | 2.47(1.24) | 2.47(1.21)* | 2.46(1.32) | 2.37(1.22) | 2.76(1.25) |
| Discussion forums on coaching and sport | 2.20(1.21) | 2.21(1.19)* | 2.16(1.26) | 2.14(1.18) | 2.37(1.26)* |
| Online learning courses, e-learning | 2.11(1.25) | 2.07(1.22) | 2.21(1.34)* | 2.09(1.24) | 2.16(1.28)* |

We inquired about how the coaches would prefer to receive education in the future. We received 2494 answers, and Figure 20 illustrates the preferences coaches shared for receiving education in the future, which can be of interest when planning and implementing new courses and programs.

*Figure 20. Coaches' preferred modes for receiving education in the future*



Looking at the learning sources coaches perceived as impactful on their work and their mode of preference for how to receive education, those who develop coaching education should consider how to bring the most impactful sources into the weekend classroom setting. This becomes key when we consider that 59% of the respondents said other people have influenced them in their coaching practices, primarily other coaches, pointing out that "peers listen to peers". Furthermore, the weekend classroom course encompasses a socialization aspect between learners themselves, as well as between learners and teachers with expertise in their field. It appears that is more about who delivers the teaching and how it is delivered that makes the difference to the learners.

The coaches in this study shared that they aspire to develop and to advance their competencies and expertise. When asked if they have encountered obstacles in their professional development, only 24% reported having faced obstacles related to advancement. The obstacles most faced were lack of experience, lack of knowledge and competence, absence of financial support, and conflicting roles within the sports setting (club, team, federation). Table 10 presents the average score of the obstacles experienced by the coaches and how much the average score deviated among the coaches(i.e., means and standard deviations in the parentheses). Overall, the average scores for these obstacles were somewhat close the middle score of 3 (measured on a scale from 1 to 5, ranging from "doesn't apply at all to me as an obstacle" to "applies very much to me as an obstacle"), signifying not a high impact of obstacles in coach advancement. Significant differences were computed between men and women as well as volunteers and employed coaches, and are marked with an asterisk.

*Table 10. Obstacles faced by the coaches in their professional advancement by gender and involvement status*

| | ***All*** | ***Men*** | ***Women*** | ***Volunteer*** | ***Employed*** |
|---|---|---|---|---|---|
| Lack of experience | 2.81(1.34) | 2.72(1.33) | 3.08(1.36)* | 2.91(1.36) | 2.53(1.25)* |
| Lack of knowledge, competence | 2.64(1.25) | 2.55(1.21) | 2.91(1.35)* | 2.78(1.26)* | 2.27(1.16) |
| Absence of financial support | 2.10(1.32) | 2.14(1.31) | 1.99(1.33) | 2.00(1.29) | 2.39(1.34)* |
| Conflict in my roles in the sport or within club/team/federation | 2.03(1.26) | 2.06(1.27) | 1.96(1.25) | 2.00(1.27) | 2.11(1.25) |
| Lack/inappropriateness of facilities/equipment for advancement | 2.01(1.25) | 1.99(1.22) | 2.06(1.34) | 1.96(1.24) | 2.13(1.28)* |
| Misuse of power by club/team, federation or a person | 2.01(1.42) | 2.04(1.42) | 1.90(1.41) | 1.93(1.39) | 2.20(1.48)* |
| Lack of prerequisite certification | 1.89(1.19) | 1.86(1.17) | 2.00(1.25)* | 1.93(1.22) | 1.79(1.12) |
| Lack of interest in professional advancement | 1.87(1.16) | 1.87(1.15) | 1.89(1.19) | 1.98(1.21)* | 1.60(0.98) |
| Qualified yet overlooked | 1.84(1.270 | 1.82(1.25) | 1.91(1.35) | 1.70(1.19) | 2.19(1.41)* |
| Low confidence as a coach | 1.83(1.06) | 1.74(1.01) | 2.12(1.18)* | 1.87(1.06)* | 1.72(1.05) |
| No talented athletes to develop | 1.77(1.06) | 1.81(1.09)* | 1.66(1.03) | 1.73(1.06) | 1.89(1.11)* |
| Absence of support from my employer | 1.60(1.07) | 1.61(1.07) | 1.59(1.09) | 1.48(1.00) | 1.91(1.20)* |
| Personal health, injuries | 1.45(0.90) | 1.39(0.83) | 1.63(1.09)* | 1.43(10.90) | 1.49(0.91) |
| Lack of work opportunities | 1.44(0.96) | 1.44(0.96) | 1.44(0.97) | 1.33(0.85) | 1.71(1.14)* |
| Discrimination (over gender, religion, sexual orientation, age, ethnicity/nationality, etc.) | 1.33(0.86) | 1.26(0.76) | 1.55(1.11)* | 1.26(0.78) | 1.49(1.03)* |
| Undesirable by the media | 1.17(0.58) | 1.18(0.60) | 1.13(0.50) | 1.14(0.51) | 1.24(0.71)* |

Average scores in Table 10 show that women scored significantly higher on certain obstacles than men. These are internal obstacles such as lack of experience and knowledge and low confidence as a coach, while men felt they faced more the external obstacle of not having talented athletes to develop. Considering that women on average have fewer years of coaching experience than men (see Figure 10a), this could explain their perceived lack of knowledge and competence and lower sense of confidence as coaches. Though gender stereotypes were not researched directly, there is a possibility that they are embedded in these findings, as traditionally and across professions, women are less likely to feel confident and competent. The data reveals similar views held also by the volunteer coaches. On the other hand, employed coaches face more job-related obstacles, among them abuse of

power by the club/team/federation or individuals, inadequate facilities and equipment, and lack of support from the employer. These also are external factors reflecting possibly the number of high men who coach as employed.

We also asked the coaches if they are registered in any coaching databases in Norway or abroad. Only 437 (9%) of coaches are not registered in any coaching database, while 1315 (26%) did not know if they are. Majority of those who are registered are in a database in Norway (n = 3084, 61%). A few are registered both in Norway and abroad (n = 176, 4%) or just abroad (n = 24, 1%). Seventy-two percent of the registered coaches in a database are volunteers. This may be because the sample consists of more volunteers than employed coaches, and more volunteers than employed coaches are registered in a database (e.g., Norway's "Min idrett"). Perhaps driven by the motive to help their children's sport and without a strong interest to advance a career in coaching, more volunteers than employed are registered and do not know if they are registered by the employer, whereas more employed coaches are registered in Norway and abroad. Men and women did not differ. We then asked whether they receive regular updates on coaching education and development opportunities from organizational affiliations. Forty-three percent noted they receive such information, 3% receives material but does not read these, 26% does not receive any, while the remaining 28% does not receive yet would like to get information.

## Stopping Coaching

Of the 5977 coaches who answered the PROCON survey, 16% reported that they were inactive (not coaching) at the time of data collection. We still invited them to answer many of the questions, and some additional ones related to why they stopped coaching to help us learn why one would take a break or quit coaching. Figure 21 shows that 36% of the inactive were women, which is 10% more women than in the total PROCON sample (see Figure 1). The ratio between volunteers and the employed is the same for active and inactive coaches. Looking at the familial status and age groups of the inactive coaches, 62% were married/in a cohabitation relationship with children, and 66% were over the age of 40.

*Figure 21. Gender, involvement status, family status and age of the inactive coaches*

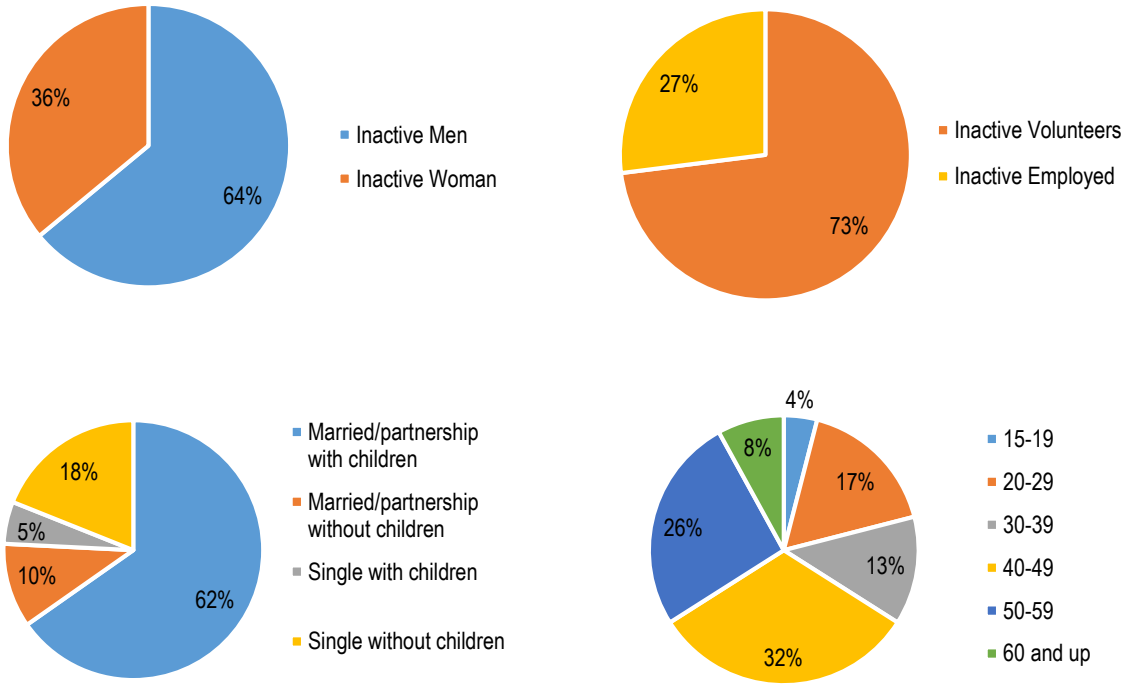



Figure 22 illustrates at what age the inactive coaches started coaching, revealing that significantly more young women than men entered by the age of 20, whereas significantly more men started coaching between the ages of 20 to 49.

*Figure 22. Age of the inactive coaches when started coaching by gender*

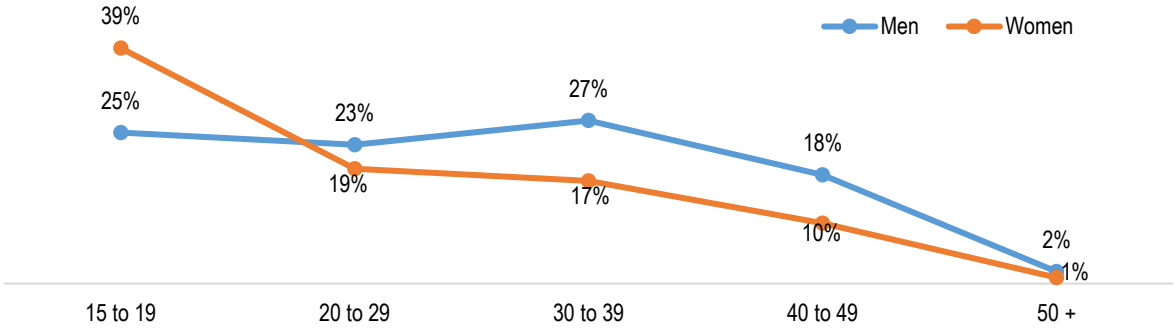
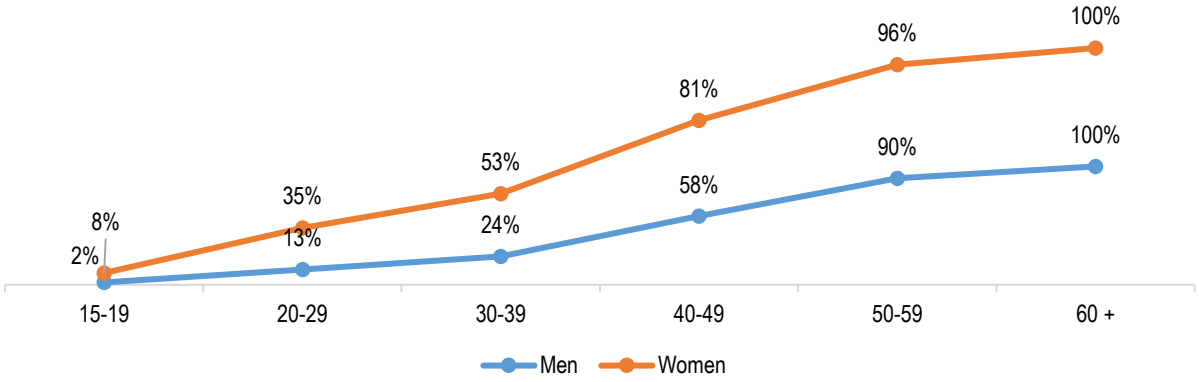



Figure 23 shows the ages of coaches who were not coaching (inactive) at the time of data collection, by gender. According to it, almost twice as many women (53%) as men (24%) were not coaching by the age of 40. While high rates of inactive coaches over the age of 50 may simply reflect the time to 'retire' from coaching, the high number of women who already stopped coaching before 'retirement age' raises the question, why and how we lose so many young women coaches. This may shed light on various gender-related issues discussed earlier in the report, such as why women are not well represented in coaching and/or have less years of coaching experience.

*Figure 23. Age of inactive coaches at data collection time by gender*

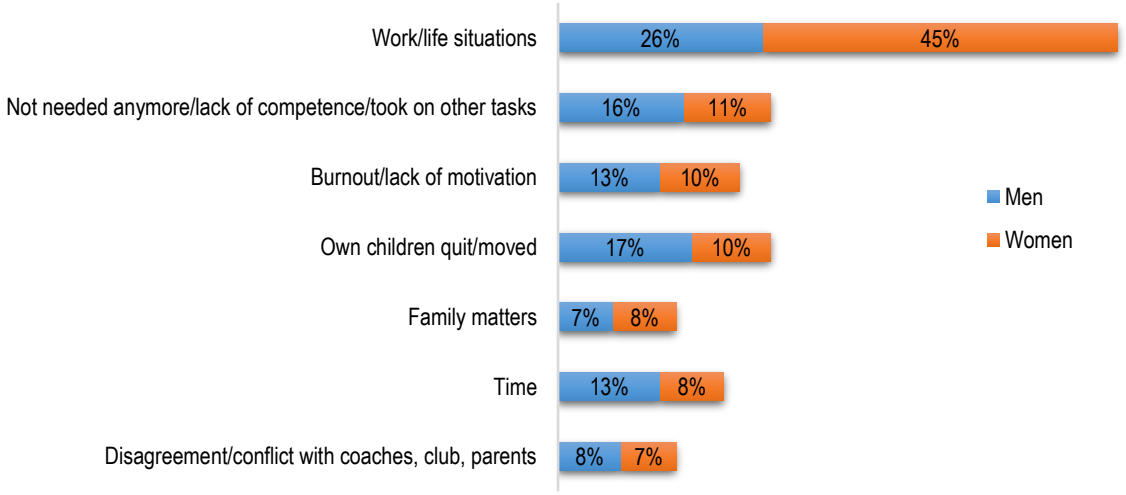



Looking at these findings in conjunction with the beliefs that "women coaches have to work harder to achieve the same level of success with men", "it is harder for women to combine family life with a coaching career" and "men coaches have better conditions to achieve success than women do" (Table I in Appendix A), we have indications for areas that can improve the experiences of women in sports coaching. If we improve the lived experiences of women in coaching then representation of women may increase consequently.

Table I (Appendix A), presents the views of men and women, volunteering and employed coaches as well as those educated and not educated as sports coaches on a series of issues related to gender inequalities in sport. Coaches were asked to answer on a scale from 1 to 5 if they felt these conditions are true within Norwegian sports (1 = this is not true at all for sports in Norway, 5 = this is very true for sports in Norway). On the issues "women coaches have to work harder to achieve the same level of success with men", "it is harder for women to combine family life with a coaching career" and "men coaches have better conditions to achieve success than women do", both genders scored higher than the average score of 2.5. Significant differences exist on these beliefs between those with and without coaching education/training; those with education appear to see more challenges and hardships for women than those without education. It may be the case that while developing sport specific knowledge, competencies and skills coaches also become more sensitive to matters of gender inequalities or perhaps more prejudiced in which case the education provided needs to be revisited.

The inactive coaches also shared their reasons for exiting coaching through an open-ended question, and the content of their answers was organized thematically. “Work-life balance challenges” is the most common reason reported by both women and men leading them to the decision to stop coaching. Nonetheless, significantly more women than men report this challenge. Figure 24 shows all of the reasons to quit reported by the inactive coaches. This data gives us insight into reasons why coaches quit, and pinpoint areas for Norwegian sports to work on for improving the experiences of coaches, in order to retain men and women coaches longer.

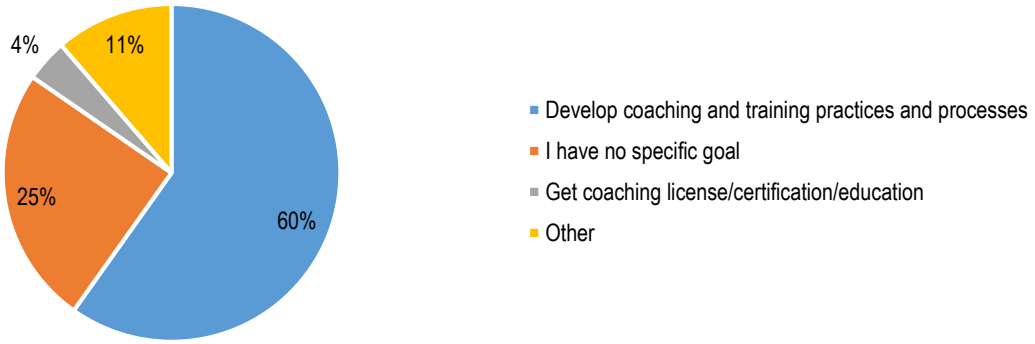
*Figure 24. Reasons for exiting coaching by gender for the inactive coaches*




## Looking into the Future

We asked the 5047 active coaches about goals they would pursue in the future as coaches. Figure 25a shows that while the majority of them (60%) wants to develop their coaching further, 25% has no goals. Does the absence of a goal imply that coaching is taken rather lightly, that they do not aspire to continue as coaches or that the respondents do not view it as an area for personal or professional development? We do not know enough about this as in-depth data was not collected, but it is an important area for further exploration in order to understand the motivation and investment of active coaches -- this knowledge can impact the growth, development and retention of coaches in the future.

*Figure 25a. Active coaches’ goals for the future in coaching*



Figures 25b, c, and d illustrate future goals for active coaches, by gender, involvement status, and age.

*Figure 25b. Active coaches' goals for the future in coaching by gender*

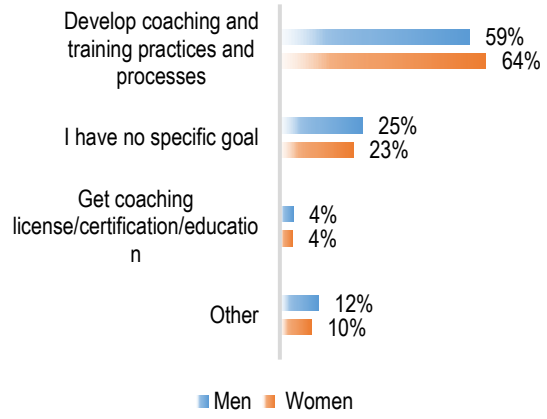
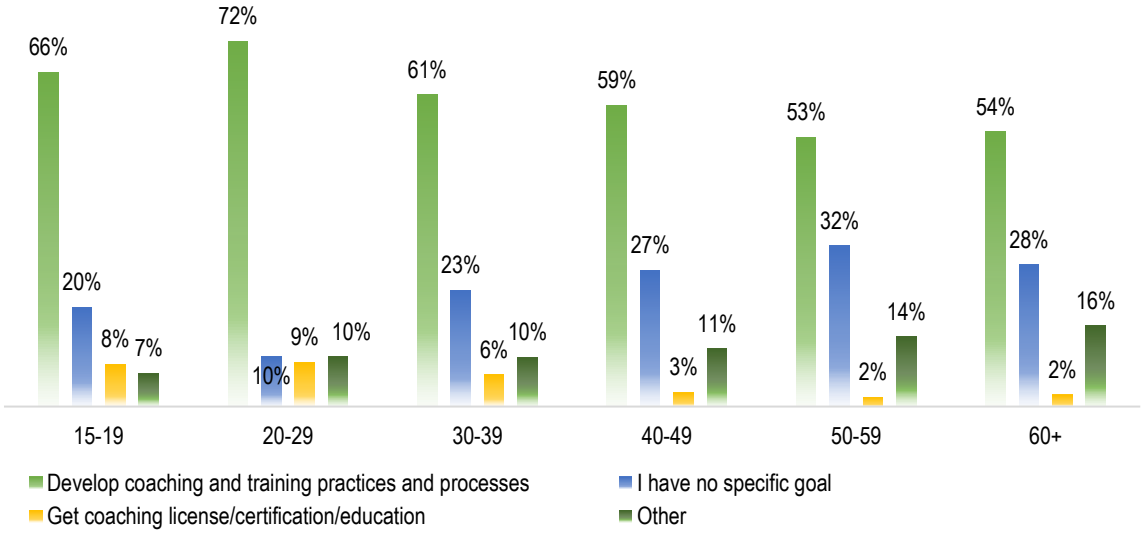



*Figure 25c. Active coaches' goals for the future in coaching by involvement status*


*Figure 25d. Active coaches' goals for the future in coaching by age*




Looking at men and women, there are no differences on future aspirations, yet there are significant differences between volunteers and employed, with fewer volunteers reporting the goal to develop their coaching practices. Norwegian sports is run and supported by volunteer coaches, especially at the developmental stages (children's and youth sport), and these findings require follow-up. These findings may be related to the parent coaches' motivation to coach or it could be related to a low valuation of the need for professional development due to the voluntary nature of their coaching. Regardless of the reason, when 29% of the people who run and support the foundations of Norwegian sports report that they do not have specific goals related to coaching may be a stumbling block in improving the quality of coaching practices and consequently for athlete and sport development in general. The finding that 25% of the volunteer coaches have no education in sports coaching amplifies this concern.

Figure 25d shows that while significant differences exist between different age groups, the aspiration to develop is held by the majority. However, the goal to improve coaching practices shows some decrease as age increases. It may be natural for the desire to develop as a coach to decline when one has served as a coach for a long time. As the goal to develop coaching practices decreases by age, we observe an increase to 'having no specific goal'. Both conditions require further examination, how long-term career coaches lose the goal to develop and why middle-aged coaches (e.g., 30 to 39 and 40 to 49 years old) do not have specific goals for their coaching.

Only 4% of the active coaches report that one of their goals as a coach is to become certified or receive education. The fact that so few coaches report this may be linked to a couple of explanations. It may be because 76% of the coaches already have received education/certification (see Figure 4) or that the obstacle of lack of time for getting further education (see Figure 19) experienced by more than half is a reality. On the other hand, this 4% may also be explained by the fact that majority of the surveyed coaches are volunteers and part-time coaches who may not have a keen interest in becoming certified or getting more education. From the perspective of sports coaching education, this is a matter that requires reflection: how can coaches be motivated to pursue certification or further education? Currently, anyone can coach in Norway without certification/license at all levels except the elite. Specialized and standardized education is key, if the vision of Norwegian sports is to further develop sport and the coaching profession and knowledge.

The last question asked the coaches to share what is the best thing in coaching based on their views and experiences. We collected 4423 answers (74%), which we organized into eight themes. Below we present these with the percentage of responses each one received.

- The opportunity to promote enjoyment, development, and good experiences for the athletes -- 47%
- Being together and know the athletes, and sharing positive moments -- 15%
- The opportunity to promote inclusion, unity, belonging and social networking -- 13%
- Feeling professional, teaching the athlete -- 8%
- The opportunity to develop values and the athletes as persons -- 6%
- The opportunity to motivate, inspire, and create arenas for sport -- 6%
- Producing results -- 4%
- It's the way to "pay back" the sport -- 2%

The development approach that characterizes all levels of sports in Norway is marked as the best thing about coaching from half of the coaches. Fewer coaches reported other high spots they find in coaching.

Figures 26a, b, and c show what men and women, volunteers and the employed as well as coaches of different ages think is best about coaching. There are gender differences, as more women than men find promoting enjoyment, development and good experiences to be the best part of coaching, while volunteers and employed coaches equally acknowledge development as the best thing. Interestingly, as coaches age, they see greater value in promoting fun, development and good experiences (the age groups differ significantly here).

*Figure 26a. Best thing in coaching by gender*

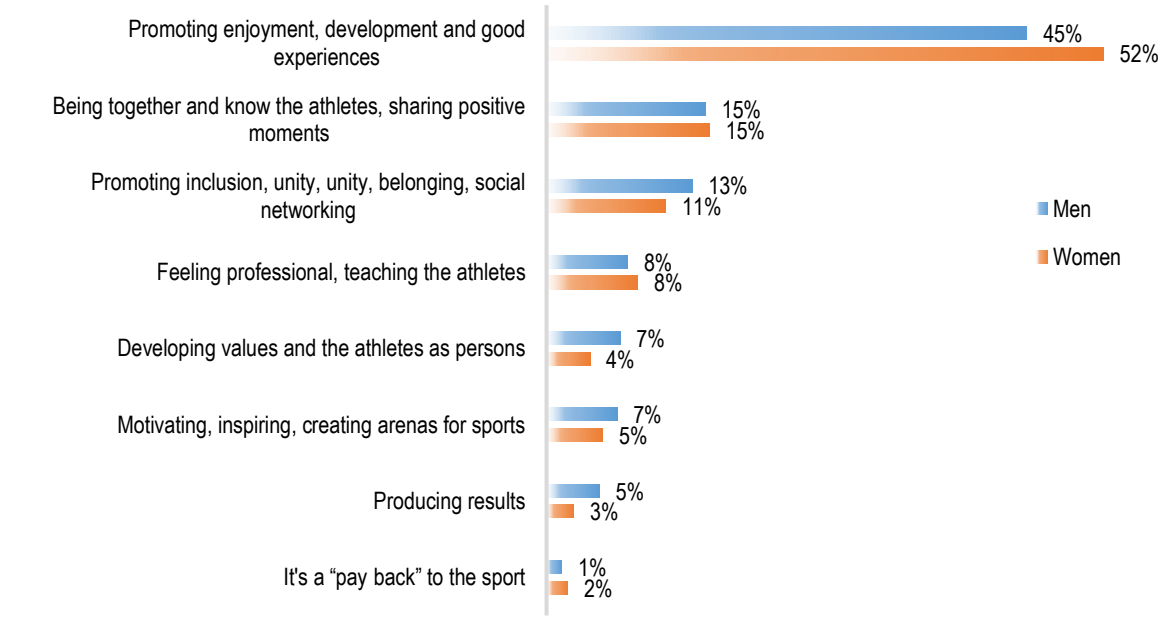


*Figure 26b. Best thing in coaching by involvement status*

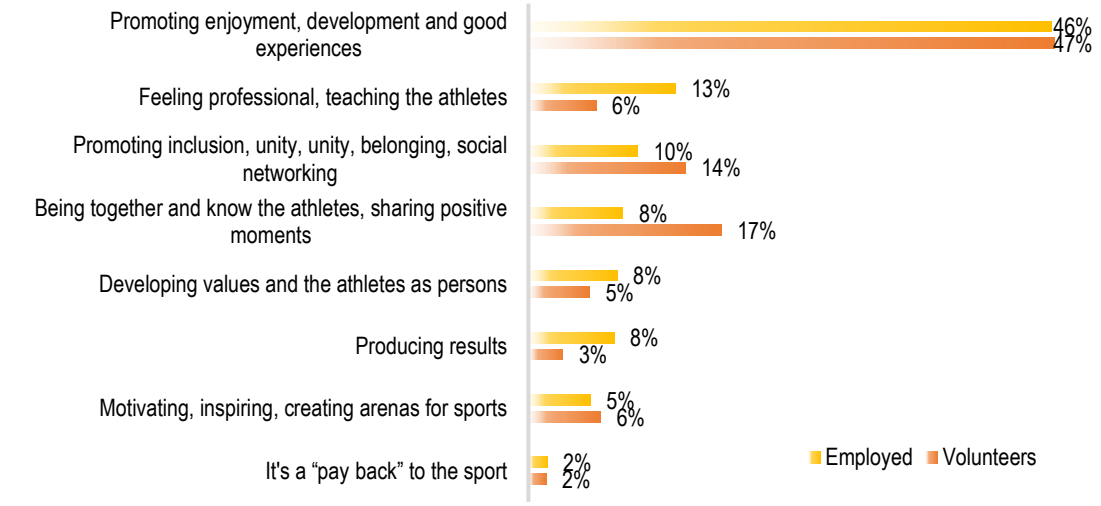
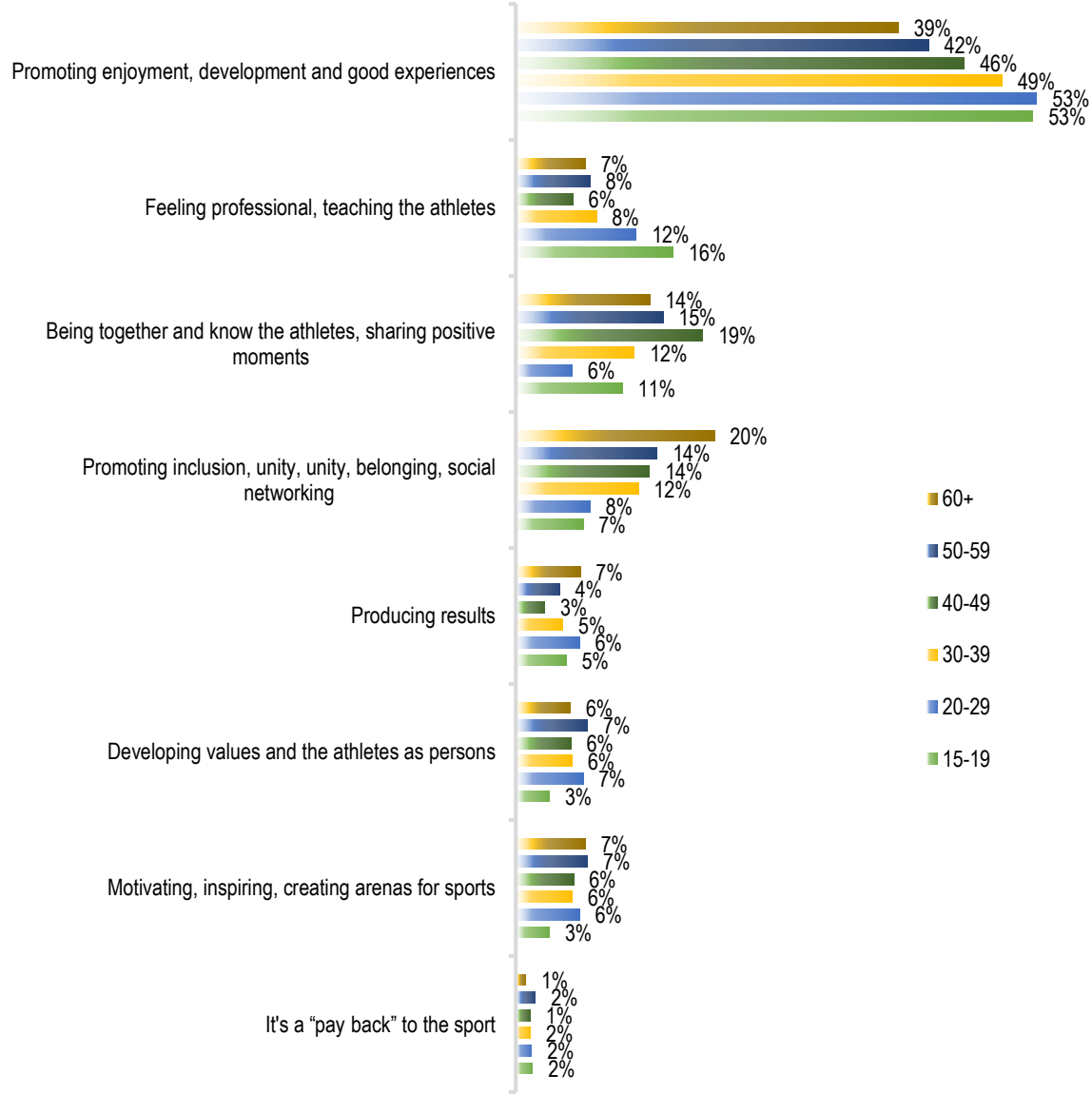



*Figure 26c. Best thing in coaching by age groups*



## Concluding Remarks

This is the largest survey of sports coaches in Norway. The data collected has increased our knowledge of the men and women who touch the lives of Norway's children, youth and adult athletes today. We have gained knowledge about their educational and sports credentials, experience as coaches and athletes, coaching knowledge and skills. We have also gained an insight into their thoughts on learning, what hinders improvement and advancement as coaches, as well as why some take a break or leave coaching. We have also learned about young coaches and the coaches of athletes with disabilities. We have further spotted some indicators for when and how coaches leave or take a break, particularly for female coaches.

The information presented in the report is supplemented here by a number of thoughts about the road ahead. We hope this report and accompanying implications will inspire the development of Norwegian sports, and that new, additional research will be prioritized to further extend and expand our knowledge on the role and practices of the coach.

## Implications

- Volunteer coaches enter coaching in rather large numbers, aspiring to help the sport their children play. Three out of ten volunteers lack coaching education. To increase their knowledge, widen the sport experiences and shorten the learning curve, communities of practice, mentoring opportunities and supporting reflective practices provide the means to coach development. Skills need to first be developed and practiced then supported and valued (e.g., in the workplace) for them to continue (to be used and impactful) beyond the learning stage.

- While it is positive to see an increase in women entering coaching in recent years, women appear to be disproportionately more likely to also exit coaching most often due to a work-life challenges. Opportunities for advancing women's representation in coaching can increase when overt and covert gendered barriers are removed (e.g., in areas like education, experience, self-confidence and discrimination), challenges managed, and practical measures implemented systematically and followed up.

- For coaching education to impact coaching practices, the learning sources and modes are key. Coaches expressed greater engagement in communities of practice that provide opportunities to relate, observe, reflect and learn from each other.

- Coaches identified knowledge gaps touching all three areas related to coaching; professional knowledge was the top need followed by interpersonal and intrapersonal knowledge. To advance coaching practices and processes, coaching education and training ought to meet the coaches' wishes and needs in all aspects of coaching.

- Most coaches report experience from coaching children and youth at the local level. Considering that the largest numbers of sports participants in Norway are found in children and youth sports, these figures make sense. However, this also presents a challenge, as many of those coaching children's sports lack education, which may have a negative implication for the coaching offered to the children and youth of Norway. It is therefore important to prioritize increasing the competencies of those coaching children and youth. An alternative is to consider new organization models for local sports which will focus on quality of coaching.

- Too many employed coaches work part-time and without a contract, and 2 in every 10 of them are not educated in sports coaching. Further steps need to be taken towards the professionalization of the coaching occupation to alleviate some of the insecurities that go with it and to enhance the expertise and culture of coaching in Norway for all sports and not just few that already bring gold medals.

- Seeing that more men than women are offered coaching positions, without these necessarily been advertised or them having applied for a vacancy, this is an area to improve. 'Open to all' recruitment processes can address one of the barriers women face in the world of sports coaching that is still managed and led by men. The fact that many young women are employed is a positive development in this context, which should be followed up with practices that will support women's long-term engagement in coaching.

- Further increase in awareness and implementation of the ethical guidelines in everyday coaching practices is a key factor for ensuring "joy for all in sport" and zero-tolerance of discrimination and harassment, creating as such safe and secure sports environments for all involved.

- There are few coaches with education and experience on coaching athletes with disabilities. Opportunities for athletes with disabilities will increase when more individuals are educated and trained to work with them. This will correspondingly also improve the quality of the experiences for athletes with disabilities.

# APPENDIX A

## Supplement Tables

The tables presented here complement the text, figures and tables already presented in the main body of the report. The asterisk next to an average score signifies a statistically significant difference between groups ($p < .05$), such as men and women or employed and volunteer coaches.

**Table I. Average scores and standard deviations of views on gender matters from men and women coaches, sports educated and not sports educated coaches, volunteers and employed coaches**

| | *All* | *Men* | *Women* | *Volunteers* | *Employed* | *Educated* | *N/Educated* |
|---|---|---|---|---|---|---|---|
| Women are underrepresented in elite sport coaching | 3.87(1.22) | 3.89(1.89) | 3.83(1.82) | 3.90(1.19) | 3.77(1.31) | 3.94(1.20)* | 3.66(1.29) |
| Women are underrepresented in youth sport coaching | 3.36(1.36) | 3.51(1.29)* | 2.69(1.44) | 3.42(1.33)* | 3.18(1.40) | 3.41(1.35) | 3.21(1.37)* |
| Women have to work harder to achieve the same level of success with men coaches | 3.01(1.41) | 3.00(1.39) | 3.05(1.48) | 3.03(1.40) | 2.95(1.46) | 3.08(1.41)* | 2.79(1.41) |
| It is harder for women than for men to combine family life with a career in coaching | 2.66(1.34) | 2.60(1.30) | 2.83(1.42) | 2.65(1.32) | 2.71(1.39) | 2.73(1.33)* | 2.44(1.33) |
| Men coaches have better conditions to achieve success than women coaches have | 2.56(1.44) | 2.54(1.43) | 2.60(1.49) | 2.58(1.44) | 2.50(1.47) | 2.59(1.45)* | 2.45(1.42) |
| Women coaches (more often than men coaches) experience the environment of elite sport as being too tough | 2.38(1.16) | 2.38(1.15) | 2.39(1.21) | 2.40(1.53) | 2.35(1.20) | 2.42(1.16)* | 2.27(1.18) |
| Women coaches have to gain more training and education than men to get the same coaching opportunities | 2.34(1.38) | 2.30(1.35) | 2.45(1.46)* | 2.38(1.39)* | 2.21(1.37) | 2.39(1.39)* | 2.17(1.33) |
| Women coaches are less ambitious than men coaches | 1.93(1.13) | 1.97(1.14)* | 1.81(1.09) | 1.95(1.13)* | 1.85(1.12) | 1.78(1.04)* | 1.74(1.03) |
| Men coaches are more likely to cope with the pressures of performance than women coaches | 1.82(1.04) | 1.81(1.03) | 1.85(1.06) | 1.81(1.03) | 1.88(1.07)* | 1.83(1.03) | 1.82(1.07) |
| Women coaches are better suited for coaching youth | 1.77(1.04) | 1.78(1.04) | 1.76(1.04) | 1.77(1.04) | 1.78(1.05) | 1.78(1.16) | 1.74(1.18) |
| The coaching role fits men better than it fits women | 1.41(0.87) | 1.44(0.89)* | 1.33(0.80) | 1.39(0.85) | 1.46(0.93)* | 1.41(0.86) | 1.42(0.89) |
| Women coaches should not train male athletes | 1.33(0.79) | 1.36(0.81)* | 1.26(0.72) | 1.33(0.78) | 1.33(0.80) | 1.34(0.80) | 1.30(0.76) |
| Men coaches should not train female athletes | 1.27(0.67) | 1.28(0.68)* | 1.24(0.66) | 1.28(0.68) | 1.25(0.65) | 1.28(0.69)* | 1.24(0.62) |

**Table II. Counts of coaches representing different sports in the PROCON. Gender and involvement status are not reported for reasons of participant protection**

| *Sport* | | *Sport* | | *Sport* | |
|---|---|---|---|---|---|
| Football | 2796 | Bandy | 14 | Freediving | 3 |
| Handball | 587 | Boxing | 14 | Futsal | 3 |
| Swimming | 307 | Weightlifting | 14 | Nordic Combined | 3 |
| Artistic Gymnastics | 304 | Table tennis | 13 | Lacrosse | 3 |
| Cross-Country Ski | 201 | Taekwondo | 13 | Aeromodelling | 3 |
| Athletics | 167 | Archery | 12 | Powerlifting | 3 |
| Ice hockey | 108 | Ski Jumping | 12 | Aikido | 2 |
| Golf | 101 | Martial Arts | 12 | Beach volley | 2 |
| Volleyball | 100 | Gliding | 12 | BJJ | 2 |
| Biathlon | 90 | Scuba diving | 12 | Bmx | 2 |
| Floorball | 86 | Shooting | 11 | Capoeira | 2 |
| Orienteering | 82 | Squash | 11 | Flatwater | 2 |
| Basketball | 80 | Mountain Bike | 10 | Sled dog | 2 |
| Judo | 58 | Triathlon | 10 | Jujutsu | 2 |
| Road Cycling | 49 | Kickboxing | 10 | Throws | 2 |
| Team Gym | 49 | Skating | 8 | Ice Sledge Hockey | 2 |
| Climbing | 34 | Billiard | 7 | Paragliding | 2 |
| Karate WKF | 33 | Bowling | 7 | Sprint | 2 |
| Cheerleading | 32 | Curling | 7 | Swing | 2 |
| Alpine | 31 | Dressage | 7 | Water Polo | 2 |
| Rowing | 30 | Speed skating | 7 | Fencing | 1 |
| Badminton | 28 | Wrestling | 6 | Kendo | 1 |
| Friskis & Svettis | 28 | Running | 6 | Short Track | 1 |
| Taekwondo Itf | 28 | Snowboard | 6 | Figure Skating | 1 |
| Parachute | 25 | Ballroom dances | 6 | Ultralight | 1 |
| Equestrian Sports | 24 | Showjumping | 6 | Motorcycle Sports | 1 |
| Dance | 21 | Whitewater Canoeing | 5 | Sailing | 1 |
| Sea Kayaking | 21 | Synchronized Swimming | 5 | Skeleton | 1 |
| Taekwondo Wtf | 20 | Free ski | 4 | Baton Twirling | 1 |
| American Football | 19 | Air sports | 4 | Telemark | 1 |
| Skiing | 19 | Motocross | 4 | Trial | 1 |
| Tennis | 19 | Paddling | 4 | Ultimate Frisbee | 1 |
| Rhythmic Gymnastics | 18 | Diving | 4 | Underwater Rugby | 1 |
| Kayak | 17 | Baseball | 3 | Wushu | 1 |
| Rugby | 16 | Disco jazz | 3 | **Total** | **5977** |

**Table III. Counts of coaches representing different Norwegian Federations in the PROCON by all, gender and involvement status. Asterisks mark sub-groups with one or more being too small thus all not reported for of participant protection**

| | *All* | Men | *Women* | *Volunteers* | *Employed* |
|---|---|---|---|---|---|
| Football | 2799 | 2503 (90%) | 294 (10%) | 2359 (84%) | 439 (165) |
| Handball | 587 | 344 (59%) | 242 (41%) | 482 (82%) | 105 (18%) |
| Gymnastics | 371 | 92 (15% | 276 (75%) | 175 (48%) | 193 (52%) |
| Swimming | 318 | 122 (39%) | 195 (61%) | 109 (34%) | 208 (66%) |
| Ski | 271 | 193 (71%) | 77 (29%) | 195 (72%) | 76 (28%) |
| Athletics | 177 | 125 (70%) | 52 (30%) | 149 (84%) | 28 (16%) |
| Martial Arts | 116 | * | * | * | * |
| Ice hockey | 110 | * | * | * | * |
| Volley ball | 102 | * | * | * | * |
| Golf | 101 | * | * | * | * |
| Bandy | 100 | * | * | * | * |
| Biathlon | 90 | * | * | * | * |
| Orienteering | 82 | * | * | * | * |
| Basketball | 80 | * | * | * | * |
| Judo | 58 | * | * | * | * |
| American Sports | 55 | * | * | * | * |
| Canoe | 49 | * | * | * | * |
| Cycling | 61 | * | * | * | * |
| Air sports | 47 | * | * | * | * |
| Equestrian | 37 | * | * | * | * |
| Climbing | 34 | * | * | * | * |
| Dance | 33 | * | * | * | * |
| Rowing | 30 | * | * | * | * |
| Badminton | 28 | * | * | * | * |
| Friskis & Svettis | 28 | * | * | * | * |
| Tennis | 19 | * | * | * | * |
| Skating | 17 | * | * | * | * |
| Diving | 16 | * | * | * | * |
| Rugby | 16 | * | * | * | * |
| Boxing | 14 | * | * | * | * |
| Weightlifting | 14 | * | * | * | * |
| Table tennis | 13 | * | * | * | * |
| Archery | 12 | * | * | * | * |
| Shooting | 11 | * | * | * | * |
| Squash | 11 | * | * | * | * |
| Kickboxing | 10 | * | * | * | * |
| Triathlon | 10 | * | * | * | * |
| Billiards | 7 | * | * | * | * |
| Bowling | 7 | * | * | * | * |
| Curling | 7 | * | * | * | * |
| Motorsports | 6 | * | * | * | * |
| Snowboard | 6 | * | * | * | * |
| Wrestling | 6 | * | * | * | * |
| Powerlifting | 3 | * | * | * | * |
| Soft- and Baseball | 3 | * | * | * | * |
| Sled dog Racing | 2 | * | * | * | * |
| Fencing | 1 | * | * | * | * |
| Luge-, Bobsleigh & skeleton | 1 | * | * | * | * |
| Sailing | 1 | * | * | * | * |

**Table IV. Counties of the PROCON coaches based on counts of responses**

| *County* | *Count* | *%* |
|---|---|---|
| Akershus | 669 | 13.3 |
| Hordaland | 531 | 10.5 |
| Oslo | 492 | 9.8 |
| Rogaland | 425 | 8.4 |
| Sør-Trøndelag | 372 | 7.4 |
| Møre and Romsdal | 280 | 5.6 |
| Buskerud | 273 | 5.4 |
| Hedmark | 258 | 5.1 |
| Oppland | 241 | 4.8 |
| Østfold | 216 | 4.3 |
| Nordland | 213 | 4.2 |
| Vestfold | 201 | 4.0 |
| Troms | 179 | 3.6 |
| Nord-Trøndelag | 147 | 2.9 |
| Vest-Agder | 140 | 2.8 |
| Telemark | 123 | 2.4 |
| Sogn and Fjordane | 106 | 2.1 |
| Aust-Agder | 77 | 1.5 |
| Finnmark | 62 | 1.2 |
| Other | 29 | 0.6 |
| Svalbard | 1 | 0.0 |

**Table V.** ***Average scores and standard deviations on coaches looking back at their child- and youth-sport days and how they thought of these experiences, answered on a scale from 1 to 5 (1 = doesn't apply to me at all, 5 = applies very much to me)***

| | *All* | *Men* | *Women* | *Volunteers* | *Employed* |
|---|---|---|---|---|---|
| I got to be with my friends and make new ones | 4.33(0.92) | 4.31(0.90) | 4.39(0.96)* | 4.32(0.92) | 4.36(0.90) |
| Training motivated me | 4.29(0.94) | 4.25(0.94) | 4.43(0.90)* | 4.24(0.96) | 4.45(0.84)* |
| Competition motivated me | 4.17(1.09) | 4.19(1.04)* | 4.09(1.23) | 4.12(1.10) | 4.29(1.06)* |
| My youth sport years influenced who I am today | 4.05(1.18) | 3.96(1.20) | 4.32(1.07)* | 3.95(1.22) | 4.33(1.02)* |
| I got support from my family | 3.98(1.20) | 3.91(1.22) | 4.20(1.11)* | 3.91(1.22) | 4.18(1.12)* |
| My sport participation gave me social status | 3.97(1.14) | 3.95(1.13) | 4.06(1.18)* | 3.94(1.15) | 4.07(1.11)* |
| The feedback I got from coaches helped me grow and improve | 3.45(1.20) | 3.35(1.20) | 3.72(1.17)* | 3.38(1.21) | 3.66(1.73)* |
| Girls and boys were given the same opportunities to train and compete | 3.14(1.51) | 2.99(1.48) | 3.56(1.51)* | 3.07(1.49) | 3.33(1.56)* |
| Athletes labeled as talents were getting more attention and opportunities than the rest | 3.00(1.38) | 2.98(1.36) | 3.05(1.43) | 2.98(1.37) | 3.05(1.40) |
| I participated in many sports and not just in one | 2.83(1.53) | 2.87(1.52)* | 2.69(1.56) | 2.82(1.53) | 2.85(1.55) |
| I was involved in planning and decisions about my sport participation | 2.65(1.28) | 2.59(1.27) | 2.80(1.30)* | 2.59(1.27) | 2.80(1.28)* |
| I had to make too many sacrifices for my sport | 2.45(1.35) | 2.44(1.32) | 2.47(1.41) | 2.34(1.30) | 2.75(1.44)* |
| Team selection process made me feel stressed | 1.97(1.15) | 1.95(1.11) | 2.02(1.24) | 1.97(1.14) | 1.97(1.73) |
| I disliked the pressure in the sport (e.g., from coaches, parents, peers) | 1.81(1.11) | 1.70(1.08) | 1.90(1.19)* | 1.80(1.10) | 1.87(1.14)* |
| Some coaches were abusive (e.g., verbally, physically, emotionally) | 1.64(1.05) | 1.64(1.04) | 1.65(1.09) | 1.60(1.02) | 1.74(1.21)* |
| There was a lot of focus on my body | 1.52(0.92) | 1.47(0.86) | 1.69(1.05)* | 1.45(0.84) | 1.76(1.09)* |

**Table VI.** ***Average scores and standard deviations on why coaches started coaching answered on a scale from 1 to 5 (1 = does not apply to me at all, 5 = applies very much to me)***

| Started coaching because… | *All* | *Men* | *Women* | *Volunteers* | *Employed* |
|---|---|---|---|---|---|
| I wanted to contribute to athlete learning and development | 3.96(1.17) | 3.97(1.16) | 3.95(1.19) | 3.90(1.19) | 4.14(1.09)* |
| I was asked to coach by the federation, club, parents, other coaches | 3.60(1.48) | 3.53(1.49) | 3.79(1.46)* | 3.55(1.49) | 3.76(1.46) |
| I wanted to give back to my sport | 3.28(1.48) | 3.22(1.47) | 3.47(1.49)* | 3.18(1.49) | 3.59(1.38)* |
| My child(ren) started participating in sports and I wanted to help | 3.02(1.89) | 3.18(1.88)* | 2.58(1.86) | 3.48(1.82)* | 1.64(1.37) |
| I wanted to contribute to athlete winning and success | 2.63(1.36) | 2.70(1.36)* | 2.46(1.32) | 2.47(1.320 | 3.12(1.36)* |
| I wanted to stay involved in sports after my sport career ended | 2.60(1.57) | 2.60(1.55) | 2.58(1.61) | 2.37(1.49) | 3.28(1.60)* |
| I was inspired by a role model of mine (coach, athlete, sport leader, etc.) | 2.51(1.46) | 2.45(1.44) | 2.67(1.49)* | 2.33(1.42) | 3.05(1.46)* |
| I was told by someone I would be a good coach | 2.16(1.37) | 2.09(1.34) | 2.38(1.43)* | 1.99(1.30) | 2.69(1.44)* |
| My sport was the only thing I knew so coaching was the next best thing after competing | 2.01(1.35) | 1.99(1.33) | 2.07(1.40) | 1.84(1.24) | 2.54(1.51)* |
| I wanted a career in coaching | 1.99(1.30) | 2.03(1.33)* | 1.88(1.22) | 1.71(1.11) | 2.83(1.48)* |
| I was pressured to coach by the federation, club, others | 1.33(0.78) | 1.32(0.76) | 1.35(0.81) | 1.36(0.81)* | 1.23(0.68) |
| I needed the income | 1.26(0.79) | 1.19(0.66) | 1.47(1.05)* | 1.08(0.42) | 1.82(1.26)* |

**Table VII. Average scores and standard deviations of factors experienced as obstacles by the coaches for gaining further education**

| | *All* | *Men* | *Women* | *Volunteers* | *Employed* |
|---|---|---|---|---|---|
| Lack of time | 4.21(1.13) | 4.19(1.13) | 4.25(1.12) | 4.30(1.06)* | 3.91(1.28) |
| No course availability | 3.15(1.43) | 3.07(1.42) | 3.38(1.45)* | 3.06(1.45) | 3.41(1.36)* |
| Work/life balance challenges | 3.12(1.42) | 3.14(1.40)* | 3.03(1.49) | 3.21(1.41) | 2.83(1.44)* |
| No course flexibility | 2.91(1.38) | 2.90(1.37) | 2.95(1.42) | 2.85(1.39) | 3.12(1.36)* |
| Family situation | 2.71(1.45) | 2.74(1.42)* | 2.62(1.54) | 2.86(1.43)* | 2.24(1.43) |
| No course information | 2.54(1.32) | 2.51(1.31) | 2.63(1.37)* | 2.50(1.32) | 2.67(1.34)* |
| High cost | 2.44(1.50) | 2.45(1.49) | 2.40(1.49) | 2.25(1.42) | 3.03(1.55)* |
| No support by others | 2.03(1.23) | 2.08(1.24)* | 1.89(1.19) | 2.00(1.22) | 2.12(1.27)* |
| Politics in club/team | 1.82(1.17) | 1.84(1.16) | 1.78(1.18) | 1.78(1.14)* | 1.96(1.23) |
| Didn't qualify | 1.65(1.05) | 1.70(1.08)* | 1.51(0.95) | 1.64(1.03) | 1.70(1.10) |

# APPENDIX B

## PROCON Methods and Procedures

An online survey approach was used. The survey was delivered via the secure environment of CheckBox platform licensed for use by Inland Norway University of Applied Sciences (HiNN).

### Preparation for Data Collection

We worked towards the development of survey in 4 phases:

- In Phase 1 (December 2016 - January 2017), we reviewed the existing literature and coach surveys conducted previously in UK, Finland, and Sweden to generate a pool of 66 items that was reviewed by two experts, Kari Fasting on gender matters and Kristen Dieffenbach on coaching education and development. Following their recommendations, we refined the items and reduced to 65. Upon completion of this work, the Norwegian Centre for Research Data (NSD) was informed of the project and approved the study (March 2017, Ref #: 52746 / 3 / AGL).
- In Phase 2 (Mar 2017), the 65 items were further refined and then reviewed and discussed extensively during a physical meeting of a group of experts from NIF, Norway, Finland, and the USA, with expertise on similar surveys and/or coach education/development matters. The items were reduced to 63.
- In Phase 3 (April 2017), the pool of 63 items was reviewed by NIF and 14 national sport federations of Norway who offered their comments to guide further refinement of the items and reduce these to 56.
- Finally in Phase 4 (May 2017), the online version of the survey was prepared in both English and Norwegian languages and reviewed once again by NIF and the HiNN research team. Once the development work was finalized, we tested the survey externally with 15 active coaches in Norway (June 2017) and once again with nine individuals from NIF and HiNN with coaching experience (August 2017) right before it was launched.

### Data Collection, Procedures, and Ethics

As participants in this study, we invited coaches who work with all sports in Norway. The coaches were identified and located with the assistance of NIF and national federations. More specifically, the lead researcher attended meetings with NIF and federation representatives to discuss the project with them and asked them to share their coaches' electronic addresses (from grass root to national team). 69 532 e-mail addresses were collected by NIF and delivered securely to the research team via the use of external hard-drives. These were initially cleaned for double entries and then for verification purposes via the use of the Neverbounce software.

These actions lead to the retaining of 54 878 e-mail addresses, which were used for launching the survey on August 28, 2017. Four reminders were sent over the next three months (September 6, 17, 28 and November 11, 2017), targeting different days of the week to facilitate the coaches' busy schedules. To increase the number of participants, coaches were also invited to answer the survey via the use of social media accounts that NIF and national federations hold--this was an effective practice previously used by Finnish Olympic Committee when they conducted their coach surveys. The survey link was posted on social media accounts three times (September 18, 26, and November 11, 2017).

Considering the sensitivity of the data collected, all persons involved in the process of participant identification were bind by a confidentiality agreement. In June 2018, all personal information collected that could identify individuals were deleted (e.g., year of birth). The survey was offered in two languages, English and Norwegian, to accommodate any foreign coaches working in Norway. Prior to accessing the survey, the coaches were presented with a consent form.

The list of e-mail addresses used for data collection were deleted once data collection period closed in November 2017. At the end of the survey each coach was asked to give voluntarily his/her e-mail address for future research

and development projects. On this call, 2430 coaches responded and voluntarily shared their electronic addresses. The list of e-mails collected was stored separately from the data used in the analyses, as did not relate to the write up of the present report.

The survey responses received from coaches via the use of CheckBox were decoded into the SPSS software blind of the e-mail addresses these were sent. The person(s) who developed the CheckBox survey and worked for decoding responses from the CheckBox platform to SPSS were also bind with a data processor agreement for protecting the respondents. Furthermore, an agreement was signed with NIF who co-financed this study regarding data ownership and access issues. According to the signed contract, the data is co-owned by NIF and HiNN, while operated strictly be the members of the research team. The study was conducted following the ethical standards of NSD.

We collected 5396 answers via the e-mail invitations and 629 via the social media links, totaling 6025 responses. Considering the initial number of invitees via e-mail, 54 878, and the number of responses received to the e-mail invitation, the response rate of the PROCON is 10%, which is an acceptable rate for an external survey that typically reach rates of 10-15%. The web-link invitation sent via social media cannot be part of the response rate calculation. We cleaned up the collected answers for double entries, unethical answers, and missing data and ended up with 5977 valid responses. To ensure anonymity the results are presented in such ways making it impossible to recognize individual respondents.

## Data Analysis and Report Write Up

The data were analyzed using the SPSS software for the closed-ended questions while content analyses were performed for the open-ended ones. The findings in the report are based on the total sample of the 5 977 responses and the subgroups we created for the purposes of this report. To make better meaning of the data in certain instances, we grouped the coaches as active and inactive coaches, men and women, volunteers and employed, educated and not educated as sports coaches, age groups as well as coaching experience groups. These served as independent variables for learning about the sports coaches in Norway.

For the closed-ended questions depending on the level of the dependent variable, we employed descriptive statistics, cross-tabulations, independent sample t-tests, and ANOVAs as methods of statistical analyses. Discrete variables are summarized in the report with percentages and continuous variables with the central tendency measures of the mean and standard deviation. For the open-ended questions, content analysis aiming to organize the multiple answers into fewer meaningful themes was performed by three members of the research team, individually at first, then discussed until agreement was reached among the three. As a final step, all five researchers further discussed and refined the categorization systems.

The statistical differences presented in the report were significant at the .05 probability level. Relationships between dependent variables (e.g., views on talent identification and what they work for with their athletes) that may explain some of the differences found in the demographical variables, mainly used as independent variables (e.g., gender or involvement status), are not explored here but will be in journal articles that will be made available to all sport audiences.

## Strengths and Weaknesses

As every research study, the PROCON has certain strengths, outlined here:

- The PROCON is the largest national data set of sports coaches worldwide to our knowledge and was developed specifically for coaches and coaching in Norway.
- To develop the PROCON we explored similar national surveys found in the literature in order to learn from the strengths and weaknesses and deliver a quality product.

- The PROCON maps the wider picture of coaches working in Norway. While the findings of the PROCON reveal a number of challenges for female coaches working in Norway, this is also a key strength of this report as these findings open the door to actions and changes that eventually can help close the gender gap in sports coaching.

Nonetheless, the weakness of the PROCON are also important and reported here:

- The small number of coaches answering the survey for many sports limited both the use of these data and the analyses to be performed for these sports and the federations they represent in order to protect the anonymity of the respondents.
- The very large number of participants in this study, requires that we treat its findings cautiously as oftentimes analyses of such large samples suffer from Type II error, known as a "false negative" finding (a false negative finding indicates that a condition does not hold, while in fact it does. In other words, incorrectly no effect has been found).
- The large differences in numbers between subgroups such men and women, volunteers and employed coaches, age groups of the surveyed coaches can also lead to Type II error.
- The PROCON findings may be limited by a sampling bias, considering the absence of knowledge on how representative the 5 977 coaches are of the coaches' population in Norway.
- The PROCON findings are also limited by the design of the study, which was cross-sectional. A longitudinal design could give more meaningful answers to key questions regarding coaches' pathways, ways of learning and developing, etc.
- Finally, the survey questions developed to elicit answers were not psychometrically standardized, which may limit the findings of the study; to overcome this weakness each variable is presented separately.

Future research should take steps towards exploring both the width and depth of the findings presented here. This will entail the use of quantitative and qualitative designs (e.g., longitudinal, phenomenology, case studies, mixed methods) in order to overcome the weakness of the PROCON and to shrink further the knowledge gap we have on coaches and coaching in Norway.

# APPENDIX C

## Key Findings for Six Sports Federations

We present here the key findings for the six federations that satisfied the criterion: 'coaches should be unidentifiable when allocated to subgroups.' Following the key findings for each federation, a series of tables presents the variables described in the text (see Tables C to Z). Table A lists the sports disciplines represented in the sample for each federation. Table B presents the number of coaches in the six federations in total, by gender and involvement status. Analyses by discipline, gender and involvement status, under each federation were not computed due to a very small number of coaches by discipline.

*Table A. Sports disciplines represented in the PROCON sample*

| ***Federation*** | ***Disciplines of the coaches*** |
|---|---|
| Athletics | Throws, running, sprinting, athletics in general |
| Football | Football, futsal |
| Gymnastics | Artistic gymnastics, rhythmic gymnastics, teamGym |
| Handball | Handball |
| Ski | Alpine, free ski, ski jumping, nordic combined, cross country, telemark |
| Swimming | Swimming, synchronized swimming, diving, water polo |

*Table B. Number of coaches in total and by gender and involvement status in the PROCON.*

| | ***All*** | **Men** | ***Women*** | ***Volunteers*** | ***Employed*** |
|---|---|---|---|---|---|
| Athletics | 177 | 70% | 30% | 84% | 16% |
| Football | 2799 | 90% | 10% | 84% | 16% |
| Gymnastics | 371 | 15% | 75% | 48% | 52% |
| Handball | 587 | 59% | 41% | 82% | 18% |
| Ski | 271 | 71% | 29% | 72% | 28% |
| Swimming | 318 | 39% | 61% | 34% | 66% |

## Supplementary Reports by Federation

### Norwegian Athletics Federation

Eighty-four percent of athletics coaches are volunteers, 70% are men, 34% are aged between 40 and 59, and 35% are aged between 50 and 59. Seventy-one percent are married or in cohabitation relationships with children and 35% have completed education at the bachelor's level, with 43% at the master's level. Twenty-seven percent have sports coaching education/training at the Trainer 1 level and 25% at the Trainer 2 level. They have experience as children (55%), youth (77%) and adult (69%) athletes themselves, and many of them played two or more sports as children (79%) and youth (76%), as well as some of them as adults (47%). Majority of the coaches in athletics have experience as parent coaches (71% of them have coached their own children and 89% their partner's children). Their experience is extensive, as the majority have coached for more than 23 years (29%), while 25% have 0 to 5 years of experience, 21% have 6 to 10 years of experience and 25% has 11 to 22 years of experience. Most of them are experienced in coaching youth (91%), both genders (99%), primarily at the local level (88%).

For athletics coaches, entry into coaching does not peak at one age group; instead, it spreads along the age groups of 15 to 39 (79%). At the time of data collection, 72% of the employed athletics coaches had been offered their current job, while 52% of the volunteer coaches volunteered themselves and 33% had been asked to coach. All of the employed coaches all of them work part-time. Of the athletics coaches 43% without a contract and 27% with a

written contract. Majority of them (64%) works as head coaches with or without assistants, and 57% of them serve in roles other than coaching within the sports community, mainly administrative ones.

The top three reasons to start coaching athletics were: to contribute to athlete learning and development; been asked to coach by the federation, club, parents, coaches, etc., and wanting to give back to their sport. Thirty-six percent of those who stopped coaching did so because of work-life balance matters. Athletics coaches consider producing results (19%) as the most important thing in their work with their athletes and teams. Sixty percent of them think they can see in an athlete the potential to become exceptionally good between the ages of 13 and 19.

Thirty percent of the athletics coaches were informed of ethical guidelines in writing (n = 53) and 37% orally (n = 66). Fifty-seven percent of those who were informed in writing endorsed these by signing them. Seventy-five percent of those working with athletes under the age of 19 underwent the required criminal record check (n = 123) when they started their most recent position and 27% of these coaches underwent this process annually.

Few athletics coaches have an education in coaching athletes with disabilities. Twenty-one coaches have specialized in specific disabilities, and only 3 have education that focuses on a specific sport. More coaches (n = 28) reported having experience in coaching athletes with disabilities than having relevant education. This coaching experience is mainly at the local level.

More of the athletics coaches attained their certification following the current trainer model, Trenerløypa (from 2011 or later). Ninety-three percent recognize a great value in gaining education, competencies and skills in their work as coaches, and 50% consider it likely that they will pursue more education in the next year. Thirty-eight percent prefer attending weekend classroom courses and 31% prefer courses that combine classroom and online learning. The top three thematic areas in which they perceive a need for more education are sports-specific knowledge (e.g., technique, tactics, equipment or technology); short and long-term planning of training and competitions; and sports psychology, pedagogy and didactics. They report that the most impactful sources for improving their coaching knowledge and/or skills are athlete feedback, observing and working with other coaches, and reflection on own or other coaches' practices.

Sixty-one percent of athletics coaches have experienced obstacles to gaining education, and 34% faced obstacles in their advancement as coaches. With regard to education, lack of time is the most prominent barrier, followed by matters of work-life balance and lack of available courses. The most common obstacles associated with advancing as a coach are lack of experience and knowledge, conflicting roles within the sport, and lack of funding.

The best thing about being an athletics coach is the opportunities they have to stimulate development, fun and good experiences (49%). Sixty-five percent of them aspire to develop their coaching practices in the future, 16% have no specific goal, 2% want to become certified as coaches.

## Norwegian Football Federation

Eighty-four percent of football coaches are volunteers, 79% are men, 54% are aged between 40 and 49 , 81% are married or in cohabitation relationships with children. Thirty-eight percent have completed education at the bachelor's level and 29% at the and master's level. Thirty percent have sports coaching education/training at the Trainer 1 level, while 29% have no coaching education. They have experience as children (67%), youth (77%) and adult (72%) athletes themselves, and many of them played two or more sports as children (73%) and youth (58%), as well as some of them as adults (31%). Almost all football coaches have experience as parent coaches (95% of them coached their own children and 95% their partner's children). Their experience is extensive, ranging from being a novice coach with 0 to 5 years of experience (30%) to coaching for more than 23 years (19%). Most of them are experienced in coaching children (88%) and youth (64%), mixed gender teams (57%) as well as men only (32%), primarily at the local level (98%).

For football coaches, entry into coaching primarily takes place between the ages of 30 and 39 (42%). At the time of data collection, 81% of employed football coaches had been offered their current job, 48% of the volunteer

coaches volunteered themselves and 39% were asked to volunteer. The vast majority of the employed coaches worked part-time (81%). Fifty-five percent of all coaches have no contract, while 25% have a written contract. Fifty-two percent of them work as head coaches with assistants and 26% as assistant coaches. Thirty-eight percent of them serve in roles other than coaching within the sports community, mainly administrative ones.

The top three reasons to start coaching football were: to contribute to athlete learning and development; their own/partner's child started playing the sport; and been asked to coach by the federation, club, parents, coaches, etc. Twenty percent of those who stopped coaching did so because they were not needed/lacked competence, 19% because their children also stopped, and 18% because of a challenging work-life balance. Football coaches consider 'stimulating inclusion, unity, a sense of belonging and networking' (22%) as the most important thing in their work with their athletes and teams. Sixty-one percent of them think they can see in an athlete the potential to become exceptionally good between the ages of 13 and 19.

Thirty-seven percent of the football coaches were informed of the ethical guidelines in effect in writing (n = 1039) and 40% orally (n = 1126). Forty-two percent of the coaches who were informed in writing endorsed the ethics guidelines by signing them. Eighty-seven percent of those working with athletes under the age of 19 underwent the required criminal record check (n = 2323) when they started their most recent position and 33% of these coaches underwent this process annually.

180 football coaches have an education in coaching athletes with disabilities; 158 of them have specialized in specific disabilities, and 22 have education that focuses on a specific sport. One hundred and forty coaches have reported having experience in coaching athletes with disabilities, mainly at the local level (n = 137).

More of the football coaches attained their certification following the current trainer model, Trenerløypa (from 2011 or later). Eighty-five percent them recognize a great value in gaining education, competencies and skills in their work as coaches, and 44% consider it likely to pursue more education in the next year while 19% do not believe it is likely to pursue more education in the next year. Twenty-eight percent prefer attending weekend classroom courses and 24% prefer evening classroom courses. The top three thematic areas in which they perceive a need for more education are sport-specific knowledge (e.g., technique, tactics, equipment or technology); short and long-term planning of training and competitions; and leadership and communication skills. They report that the most impactful sources for improving their coaching knowledge and/or skills are reflection on own or other coaches' practices, working with or observing other coaches, athlete feedback and experimenting with own ideas.

Fifty-eight percent of football coaches have experienced obstacles to gaining education, and 23% faced obstacles in their advancement as coaches. With regard to education, lack of time is the most prominent barrier, followed by matters of work-life balance and lack of available courses. The most common obstacles associated advancing as a coach are lack of experience, lack of knowledge and competence, and abuse of power by the club/team/federation or individuals.

The best thing about being a football coach is the opportunities they have to stimulate development, fun and good experiences (41%). Fifty-four percent aspire to develop their coaching practices in the future, 30% have no specific goal, and 5% want to become certified as coaches.

## Norwegian Gymnastics Federation

Gymnastics coaches are rather evenly distributed between employed (52%) and volunteer coaches (48%). Seventy-five percent of them are women, 27% are aged between 20 and 29 and 28% between 40 and 49 years old. Fifty percent of them are married or in cohabitation relationships with children and 25% of them are single without children. Thirty percent of them have completed education at the upper secondary school level and 33% at the bachelor's level. Fifty-one percent of them have sports coaching education/training at the Trainer 1 level and 25% of them have no coaching education. Gymnastic coaches have experience as children (71%), youth (77%) and adult (43%) athletes themselves, and many of them played two or more sports as children (69%), youth (43%)

and as adults (27%). Most gymnastics coaches have experience as parent coaches (85% of them coached their own children and 83% their partner's children). Their experience is extensive, ranging from novice coaches with 0 to 5 years of experience (31%), to over 23 years of experience (25%). Most of them are experienced in coaching children (95%) (also below the age of 6 – 62%), youth (75%), both genders, primarily at the local level (95%).

For gymnastics coaches, their engagement with coaching starts early (aged 7 to 14, 31%) and 34% at the age of 15 to 19. Fewer people in the older age groups begin coaching gymnastics (20 to 29 = 10%, 30 to 39 = 17%, 40 to 49 = 7%, 50+ = 1%). At the time of data collection, 69% of employed gymnastics coaches had been offered their current job, 47% of volunteer coaches volunteered themselves and 37% had been asked to volunteer. Most of the employed coaches worked part-time (85%) and 67% of the coaches had a contract. Fifty-seven percent work as head coaches with assistants and 23% work as assistant coaches. Forty-nine percent serve in roles other than coaching within the sports community, mainly administrative ones.

The top three reasons to start coaching gymnastics were: been asked to coach by the federation, club, parents, coaches, etc.; to contribute to athletes' learning and development; and wanting to give back to their sport. Fifty percent of those who stopped coaching did so because of a challenging work-life balance. Gymnastics coaches consider the most important thing in their work with their athletes and teams is to develop the athletes' sports skills and level of mastery (25%). Fifty-three percent of them think they can see in an athlete the potential to become exceptionally good before the age of 12.

Thirty-three percent of the gymnastics coaches were informed of the ethical guidelines in effect either in writing (n = 123) and 49% orally (n = 182). Seventy-two percent of those informed in writing endorsed the guidelines by signing them. Eighty-nine percent of those working with athletes under the age of 19 underwent the required criminal record check (n = 311) when they started their current position and 33% of them underwent this process annually.

One hundred and one gymnastics coaches have an education in coaching athletes with disabilities. Eighty-two coaches have specialized in specific disabilities and 19 coaches have education that focuses on a specific sport. Ninety-three coaches reported having experience in coaching athletes with disabilities, mainly at the local level (n = 91).

More of the gymnastics coaches attained their certification following the current trainer model, Trenerløypa (from 2011 or later). Ninety-four percent recognize a great value in gaining education, competencies and skills in their work as coaches, and 65% consider it likely that they will pursue more education in the next year. Forty-one percent prefer weekend classroom courses. The top three thematic areas in which they perceive a need for more education are sport-specific knowledge (e.g., technique, tactics, equipment or technology); sports psychology, pedagogy and didactics; and leadership and communication skills. They report that the most impactful sources for improving their knowledge and/or skills as a coach are working with or observing other coaches, athlete feedback, and reflection on own or other coaches' practices.

Sixty percent of gymnastics coaches have experienced obstacles to gaining education, and 28% faced obstacles in their advancement as coaches. With regard to education, lack of time is the most prominent barrier, followed by lack of available courses in the local community, and no flexibility in the available courses. The most common obstacles advancing as a coach are lack of experience, lack of/unsuitable facilities/equipment and lack of knowledge and competence.

The best thing about being a gymnastics coach is, opportunities to stimulate development, fun and good experiences (57%). Sixty-six percent of them aspire to develop their coaching practices in the future, 22% have no specific goal, and 3% want to become certified as coaches.

## Norwegian Handball Federation

Eighty-two percent of handball coaches are volunteers, 59% are men, 49% are aged between 40 and 49, and 79% are married or in cohabitation relationships with children. Thirty-seven percent have completed education at the bachelor's level and 29% at upper secondary school level. Thirty-three percent of them have sports coaching education/training at the Trainer 1 level, while 29% have no coaching education. Handball coaches have experience as children (64%), youth (80%) and adult (70%) athletes themselves, and many of them played two or more sports as children (82%) and youths (67%), as well as some of them as adults (35%). Almost all handball coaches have experience as parent coaches (97% of them coached their own children and 94% their partner's children). Their experience is extensive, ranging from novice with 0 to 5 years of experience (26%) to more than 23 years in coaching (32%). Most of them are experienced in coaching children (86%), youth (72%), mixed gender teams (64%), women only (31%), and primarily at the local level (95%).

For handball coaches, their entry into coaching peaks between the ages of 15 and 19 (33%) and 30 to 39 (31%). At the time of data collection, 88% of employed handball coaches had been offered their current job, 44% of the volunteer coaches volunteered themselves and 38% had been asked to volunteer. Ninety percent of the employed coaches worked part-time. Forty-one percent of all coaches worked without a contract, while 38% had a written contract. Fifty-nine percent of them work as head coaches with assistants. Forty-six percent of them serve in roles other than coaching within the sports community, mainly administrative ones.

The top three reasons to start coaching handball were: to contribute to athlete learning and development; been asked to coach by the federation, club, parents, coaches etc.; and their own child started playing the sport. Twenty-five percent of those who stopped coaching did so due to their work-life balance and 23% because they were not needed/lacked competence. Handball coaches consider 'stimulating inclusion, unity, sense of belonging, networking' and 'developing the athletes' sports skills and level of mastery' as the most important things in their work with their teams. Sixty-five percent of them think they can see in an athlete the potential to become exceptionally good between the ages of 13 and 19.

Thirty-three percent of the handball coaches were informed of the ethical guidelines in effect in writing (n = 193) and 42% orally (n = 247). Fifty-one percent of those informed in writing endorsed the guidelines by signing them. Eighty-nine percent of those working with athletes under the age of 19 underwent the required criminal record check (n = 505) when they started their most recent position and 43% of them underwent the process on an annual basis.

Only 35 of the handball coaches have an education in coaching athletes with disabilities; 33 of them have specialized in specific disabilities, and 2 have education that focuses on a specific sport. Thirty coaches reported having experience in coaching athletes with disabilities, most at the local level (n = 29).

More of the handball coaches attained their certification following the current trainer model, Trenerløypa (from 2011 or later). Ninety percent recognize a great value in gaining education, competencies and skills in their work as coaches, and 60% consider it likely that they will pursue more education in the next year. Thirty-two percent prefer weekend classroom courses and 23% prefer courses that combine classroom and online learning. The top three thematic areas in which they perceive a need for more education are sport-specific knowledge (e.g., technique, tactics, equipment or technology); short and long-term planning of training and competitions; and leadership and communication skills. They report that the most impactful sources for improving their coaching knowledge and/or skills are athlete feedback, and reflection on own or other coaches' practices, and working with or observing other coaches.

Sixty-eight percent of handball coaches have experienced obstacles to gaining education, and 22% faced obstacles in their advancement as coaches. With regard to education, lack of time is the most prominent barrier, followed by matters of work-life balance and lack of available courses in the local community. The most common obstacles associated with advancing as coaches are lack of experience, lack of knowledge and competence, and abuse of power by the club/team/federation or individuals.

The best thing about being a handball coach is the opportunities they have to stimulate development, fun and good experiences (51%). Sixty-six percent of them aspire to develop their coaching practices in the future, 19% have no specific goal, and 4% want to become certified as coaches.

## Norwegian Ski Federation

Seventy-two percent of ski coaches are volunteers, 71% are men, 44% are aged between 40 and 59, 25% are aged between 50 and 59, 73% are, married or in cohabitation relationships with children. Forty percent have completed education at the bachelor's level and 41% at the master's level. Twenty-two percent have completed education at the Trainer 1 level and 29% at the Trainer 2 level. Ski coaches have experience as children (52%), youth (73%) and adult (59%) athletes themselves, and most of them played two or more sports as children (93%), youths (85%), as well as many of them as adults (58%). All of the ski coaches have experience as parent coaches (100% of them coached their own children and 88% their partner's children). Their experience is extensive, ranging from novice to many years of experience. Seventeen percent have 0 to 5 years of experience, 27% have coached for 11 to 22 years and 26% have over 23 years of experience. Most of them are experienced in coaching children (83%), youth (78%), both genders (97%), primarily at the local level (96%).

For ski coaches, entry into coaching does not peak at one age group; instead, it spreads along the age groups of 15 to 19 (23%), 20 to 29 (29%), and 30 to 39 (27%). At the time of data collection, 68% of the employed ski coaches had been offered their current job, while 16% of them applied for a job that was advertised. Forty-six percent of volunteer coaches volunteered themselves and 42% had been asked to volunteer. Sixty-four percent of the employed coaches work part-time, and 33% of the coaches have a written contract. Forty-three percent of them work as head coaches with assistants and 27% work as assistant coaches. Fifty-eight percent of them serve in roles other than coaching within the sports community, mainly administrative ones.

The top three reasons to start coaching ski sports were: to contribute to athlete learning and development; they were asked to coach by the federation, club, parents, coaches, etc.; and they wanted to give back to their sport. Twenty-two percent of those who stopped coaching did so due to a challenging work-life balance and 22% stopped because their child left the sport. For the ski coaches the most important things in their work with their athletes and teams are to stimulate fun and good experiences (23%), to motivate/inspire further development and training (18%), to develop the athletes' skills and level of mastery (17%), and to prepare the training setting (17%). Sixty-six percent of them think they can see in an athlete his/her potential to become exceptionally good between the ages of 13 and 19.

Twenty-eight percent of the ski coaches were informed of the ethical guidelines in effect in writing (n = 77) and 39% orally (n = 105). Fifty-three percent of them endorsed these by signing them. Eighty-two percent of those working with athletes under the age of 19 underwent the required criminal record check (n = 205) when they started in their most recent position, and 32% of them underwent this process annually.

Only 26 ski coaches have an education in coaching athletes with disabilities; 21 of them have specialized in specific disabilities, and 5 have education that focuses on a specific sport. Twenty-one coaches reported experience in coaching athletes with disabilities, primarily at the local level (n = 20).

More of the ski coaches achieved their certification following the current trainer model, Trenerløypa (from 2011 or later). Ninety-two percent recognize a great value in gaining education, competencies and skills, and 36% of them consider it likely that they will pursue more education in the next year, while for 20% is not likely they will pursue more education in the next year. Thirty percent prefer weekend classroom courses and 29% prefer courses that combine classroom and online learning. The top three thematic areas in which they perceive a need for more education are sport-specific knowledge (e.g., technique, tactics, equipment or technology); short and long-term planning of training and competitions; and sports psychology, pedagogy, didactics/leadership and communication skills. They report that the most impactful sources for improving their coaching knowledge and/or skills are athlete feedback, reflection on own or other coaches' practices, and traditional education.

Fifty-six percent of ski coaches have experienced obstacles to gaining education, and 28% faced obstacles in their advancement as coaches. With regard to gaining education, lack of time is the most prominent barrier, followed by matters of work-life balance and lack of available courses in the local community. The most common obstacles associated with advancing as a coach are lack of experience and knowledge, and being overlooked, despite being qualified.

The best thing about being a ski coach is the opportunities one has to stimulate development, fun and good experiences (48%). Sixty-five percent of them aspire to develop their coaching practices in the future, 20% have no specific goal, and 6% want to become certified as coaches.

## Norwegian Swimming Federation

Sixty-six percent of swimming coaches are employed, 61% are women, 27% are aged between 20 and 29, 26% are aged between 40 and 49, 44% are married (or in cohabitation relationships with children) and 32% are single without children. Thirty-four percent of them have completed education at the upper secondary school level and 29% at the bachelor's level. Twenty-seven percent have sports coaching education/training at the Trainer 1 level and 21% at the Trainer 2 levels. They have experience as children (61%), youth (76%) and adult (35%) athletes themselves, and many of them played two or more sports as children (74%), youths (40%) and adults (44%). The majority of swimming coaches have experience as parent coaches (67% of them coached their own children and 71% their partner's children). The largest group of swimming coaches have 0 to 5 years of experience (45%), some have extensive experience, ranging from 11 to 22 years (16%), and some have over 23 years of experience (16%). Most of them are experienced in coaching children (90%), youth (66%), both genders (97%), primarily at the local level (93%).

For 40% of the swimming coaches, their entry into coaching is highest between the ages of 15 and 19. At the time of data collection, 64% of employed swimming coaches had been offered their current job, 52% of volunteer coaches had been asked to volunteer, and 35% volunteered themselves. Eighty-one percent of the employed coaches worked part-time, while 56% had a written contract. Forty-two percent work as head coaches with assistants, 24% as assistant coaches, and 21% as head coaches without assistants. Forty-three percent of them serve in roles other than coaching within the sports community, mainly administrative ones.

The top three reasons to start coaching swimming were: been asked to coach by the federation, club, parents, coaches, etc.; to contribute to athletes' learning and development; and wanting to give back to their sport. Fifty-three percent of those who stopped coaching did so due to challenging work-life balance. For swimming coaches consider the most important thing in their work with their athletes and teams is to develop the athletes' skills and level of mastery. Forty-eight percent of them think they can see in an athlete his/her potential to become exceptionally good between the ages of 13 and 19.

Twenty-six percent of the swimming coaches were informed of the ethical guidelines in effect in writing (n = 81) and 54% orally (n = 172). Sixty-three percent of those informed in writing endorsed the guidelines by signing them. Eighty-five percent of those working with athletes under the age of 19 underwent the required criminal record check (n = 254) when started their current position and 42% of them underwent this process on an annual basis.

One hundred and forty-three swimming coaches are educated in coaching athletes with disabilities; 93 of these have specialized in specific disabilities, and 50 coaches have education focusing on a specific sport. One hundred and seventeen coaches reported having experience in coaching athletes with disabilities, primarily at the local level (n = 105).

More of the swimming coaches attained their certification following the current trainer model, Trenerløypa (from 2011 or later). Ninety-three percent recognize a great value in gaining education, competencies and skills, and 44% of them consider it likely that they will pursue more education in the next year. Forty percent prefer attending weekend classroom courses and 23% prefer courses that combine classroom and online learning. The top three thematic areas in which they perceive a need for more education are sport-specific knowledge (e.g., technique,

tactics, equipment or technology); sports psychology, pedagogy and didactics; and short and long-term planning of training and competitions. They report that the most impactful sources for improving their coaching knowledge and/or skills are working with or observing other coaches, athlete feedback, and experimenting with own ideas.

Fifty-eight percent of swimming coaches have experienced obstacles to gaining education, and 29% faced obstacles in their advancement as coaches. With regard to education, lack of time is the most prominent barrier, followed by lack of available courses in the local community, and lack of flexibility on available educational programs/courses. The most common obstacles associated with advancing as a coach are lack of experience and knowledge and lack of appropriate facilities.

The best thing about being a swimming coach is the opportunities on has to stimulate development, fun and good experiences (54%). Sixty-eight percent of them aspire to develop their coaching practices in the future, 20% have no specific goal, and 6% want to become certified as coaches.

# Tables

### Table C. Ages of coaches by federation at data collection

| | *15-19* | *20-29* | *30-39* | *40-49* | *50-59* | *Over 60* |
|---|---|---|---|---|---|---|
| All coaches | 3% | 12% | 17% | 45% | 19% | 4% |
| Athletics | 1% | 9% | 7% | 34% | 35% | 14% |
| Football | 1% | 7% | 18% | 54% | 18% | 2% |
| Gymnastics | 14% | 27% | 16% | 28% | 11% | 4% |
| Handball | 2% | 8% | 21% | 49% | 16% | 4% |
| Ski | 1% | 13% | 14% | 44% | 25% | 3% |
| Swimming | 16% | 27% | 14% | 26% | 13% | 4% |

### Table D. Familial status and country of birth of the coaches

| | *Married* with children* | *Married* without children* | *Single with children* | *Single without children* | *Other* | *Born in Norway* | *Born in other country* |
|---|---|---|---|---|---|---|---|
| All coaches | 70% | 8% | 6% | 13% | 3% | 92% | 8% |
| Athletics | 71% | 6% | 9% | 12% | 2% | 88% | 12% |
| Football | 81% | 4% | 6% | 8% | 1% | 94% | 6% |
| Gymnastics | 50% | 12% | 6% | 25% | 7% | 88% | 12% |
| Handball | 79% | 3% | 7% | 9% | 2% | 96% | 4% |
| Ski | 73% | 9% | 5% | 11% | 2% | 94% | 6% |
| Swimming | 44% | 11% | 5% | 32% | 8% | 88% | 12% |

** Note: Married or in cohabitation relationships*

### Table E. Highest level of general education completed

| | *Primary, Lower Secondary* | *Upper Secondary* | *Bachelor's* | *Masters'* | *Doctoral* | *Other* |
|---|---|---|---|---|---|---|
| All coaches | 4% | 26% | 36% | 29% | 2% | 3% |
| Athletics | 2% | 14% | 35% | 43% | 3% | 3% |
| Football | 3% | 26% | 38% | 29% | 2% | 2% |
| Gymnastics | 8% | 30% | 33% | 24% | 2% | 3% |
| Handball | 4% | 29% | 37% | 27% | 1% | 2% |
| Ski | 2% | 11% | 40% | 41% | 3% | 3% |
| Swimming | 11% | 34% | 29% | 23% | 1% | 2% |

### Table F. Highest level of sport coaching education/training completed

| | *No coach education* | *Trainer 1* | *Trainer 2* | *Trainer 3* | *Trainer 4* | *Activity Leader* | *Other* |
|---|---|---|---|---|---|---|---|
| All coaches | 25% | 32% | 18% | 9% | 8% | 4% | 4% |
| Athletics | 18% | 27% | 25% | 14% | 13% | 0% | 3% |
| Football | 29% | 30% | 16% | 10% | 8% | 6% | 1% |
| Gymnastics | 25% | 51% | 11% | 1% | 2% | 2% | 7% |
| Handball | 29% | 33% | 18% | 8% | 5% | 3% | 1% |
| Ski | 7% | 22% | 29% | 17% | 17% | 4% | 3% |
| Swimming | 29% | 27% | 21% | 6% | 6% | 4% | 6% |

**Table G. Experiences as athletes themselves in playing sports and in coaching own children**

| | *Playing Children's sports* | *Playing Youth sport* | *Playing sports as adult* | *No athlete experience* | | *Coaching own kids* | *Coaching partner's kids* |
|---|---|---|---|---|---|---|---|
| All coaches | 64% | 76% | 68% | 1% | | 86% | 89% |
| Athletics | 55% | 77% | 69% | 0% | | 71% | 89% |
| Football | 67% | 77% | 72% | 1% | | 95% | 95% |
| Gymnastics | 71% | 77% | 43% | 0% | | 85% | 83% |
| Handball | 64% | 80% | 70% | 1% | | 97% | 94% |
| Ski | 52% | 73% | 59% | 1% | | 100% | 88% |
| Swimming | 61% | 76% | 35% | 2% | | 67% | 71% |

**Table H. Years of experience in coaching for the active coaches with no career break**

| | *0 – 5* | *6 - 10* | *11 - 22* | *23 and up* |
|---|---|---|---|---|
| All coaches | 41% | 27% | 21% | 11% |
| Athletics | 25% | 21% | 25% | 29% |
| Football | 42% | 31% | 20% | 7% |
| Gymnastics | 45% | 22% | 20% | 13% |
| Handball | 43% | 30% | 14% | 13% |
| Ski | 29% | 51% | 13% | 7% |
| Swimming | 59% | 21% | 13% | 7% |

**Table I. Experience in coaching men and women athletes/teams**

| | *Mixed gender* | *Men only* | *Women only* |
|---|---|---|---|
| All coaches | 73% | 19% | 14% |
| Athletics | 99% | 1% | 5% |
| Football | 57% | 32% | 15% |
| Gymnastics | 87% | 7% | 20% |
| Handball | 64% | 10% | 31% |
| Ski | 97% | 3% | 2% |
| Swimming | 99% | 2% | 4% |

**Table J. Experience in coaching athletes at different ages**

| | *Under 6* | *6 - 12* | *13 - 19* | *20 and up* |
|---|---|---|---|---|
| All coaches | 25% | 83% | 71% | 40% |
| Athletics | 21% | 68% | 91% | 50% |
| Football | 20% | 88% | 64% | 30% |
| Gymnastics | 62% | 95% | 75% | 33% |
| Handball | 16% | 86% | 72% | 36% |
| Ski | 18% | 83% | 78% | 32% |
| Swimming | 55% | 90% | 66% | 36% |

**Table K. Experience in coaching athletes at different levels**

| | *Local* | *Regional* | *National* | *International* |
|---|---|---|---|---|
| All coaches | 95% | 24% | 14% | 6% |
| Athletics | 88% | 43% | 31% | 15% |
| Football | 98% | 16% | 5% | 1% |
| Gymnastics | 95% | 27% | 18% | 7% |
| Handball | 95% | 24% | 11% | 2% |
| Ski | 96% | 33% | 18% | 10% |
| Swimming | 93% | 27% | 17% | 7% |

**Table L. Age at which they started coaching**

| | *7 - 14* | *15 – 19* | *20 - 29* | *30 - 39* | *40 - 49* | *50 and up* |
|---|---|---|---|---|---|---|
| All coaches | 5% | 25% | 21% | 32% | 15% | 2% |
| Athletics | 4% | 24% | 28% | 27% | 16% | 1% |
| Football | 2% | 18% | 20% | 42% | 17% | 1% |
| Gymnastics | 31% | 34% | 10% | 17% | 7% | 1% |
| Handball | 8% | 33% | 14% | 31% | 13% | 1% |
| Ski | 4% | 23% | 29% | 27% | 15% | 2% |
| Swimming | 15% | 40% | 17% | 17% | 10% | 1% |

**Table M. How volunteer coaches got the coaching position they held at the time of data collection**

| | *Volunteered myself* | *Been asked to volunteer* | *Was offered the position* | *Other* |
|---|---|---|---|---|
| All coaches | 46% | 39% | 13% | 2% |
| Athletics | 52% | 33% | 11% | 4% |
| Football | 48% | 39% | 12% | 1% |
| Gymnastics | 47% | 37% | 14% | 2% |
| Handball | 44% | 38% | 17% | 1% |
| Ski | 46% | 42% | 10% | 2% |
| Swimming | 35% | 52% | 11% | 2% |

**Table N. How employed coaches got the coaching job they held at the time of data collection**

| | *Job was advertised* | *Been asked to apply* | *Was offered the job* | *Other* |
|---|---|---|---|---|
| All coaches | 8% | 9% | 73% | 10% |
| Athletics | 0% | 21% | 72% | 7% |
| Football | 6% | 7% | 81% | 6% |
| Gymnastics | 6% | 8% | 69% | 17% |
| Handball | 4% | 2% | 88% | 6% |
| Ski | 16% | 7% | 68% | 9% |
| Swimming | 12% | 13% | 64% | 11% |

**Table O. Part time or full time coaching and terms of employment of the employed coaches**

| *Federation* | *Part time* | *Full time* | *No contract* | *Oral agreement* | *Written contract* |
|---|---|---|---|---|---|
| All coaches | 79% | 21% | 43% | 24% | 33% |
| Athletics | 100% | 0% | 43% | 30% | 27% |
| Football | 81% | 19% | 55% | 20% | 25% |
| Gymnastics | 85% | 15% | 12% | 21% | 67% |
| Handball | 90% | 10% | 41% | 21% | 38% |
| Ski | 64% | 36% | 42% | 25% | 33% |
| Swimming | 81% | 19% | 16% | 28% | 56% |

**Table P. Primary roles served by the coaches**

| | *Head coach alone* | *Head with assistants* | *Assistant coach* | *Specialty coach* | *Other* |
|---|---|---|---|---|---|
| All coaches | 16% | 48% | 24% | 5% | 7% |
| Athletics | 34% | 30% | 18% | 12% | 6% |
| Football | 11% | 52% | 26% | 4% | 7% |
| Gymnastics | 11% | 57% | 23% | 5% | 4% |
| Handball | 14% | 59% | 18% | 5% | 4% |
| Ski | 16% | 43% | 27% | 5% | 9% |
| Swimming | 21% | 42% | 24% | 7% | 6% |

**Table Q. Mean scores and standard deviations of most prominent reasons to enter coaching, with mean score above the median (middle score of 3)**

| *Federation* | *Contribute to athlete learning and development* | *Asked to coach by federation, club, parents, coaches* | *Give back to my sport* | *My child started the sport and wanted to help* |
|---|---|---|---|---|
| All coaches | 3.96(1.17) | 3.60(1.48) | 3.28(1.48) | 3.02(1.89) |
| Athletics | 4.06(1.10) | 3.56(1.41) | 3.45(1.47) | 2.87(1.86) |
| Football | 3.88(1.19) | 3.52(1.50) | 3.01(1.46) | 3.67(1.78) |
| Gymnastics | 3.88(1.22) | 3.90(1.38) | 3.25(1.55) | 2.26(1.77) |
| Handball | 4.02(1.14) | 3.70(1.45) | 3.31(1.44) | 3.33(1.84) |
| Ski | 4.22(1.07) | 3.59(1.49) | 3.43(1.49) | 3.08(1.88) |
| Swimming | 3.87(1.17) | 3.89(1.42) | 3.43(1.53) | 2.04(1.64) |

**Table R. Top 3 reasons to exit coaching as experienced by those who stopped coaching**

| *Federation* | *Work-life conditions* | *My child stopped playing* | *Was not needed anymore/lacked competences* |
|---|---|---|---|
| All coaches | 32% | 14% | 14% |
| Athletics | 36% | 14% | 7% |
| Football | 18% | 19% | 20% |
| Gymnastics | 50% | 6% | 15% |
| Handball | 25% | 16% | 23% |
| Ski | 22% | 22% | 17% |
| Swimming | 53% | 11% | 3% |

**Table S. Most important thing in their work as coaches with their athletes and/or teams**

| | *ALL* | *Athletics* | *Football* | *Gymnastics* | *Handball* | *Ski* | *Swimming* |
|---|---|---|---|---|---|---|---|
| Develop athlete sports skills and mastery | 19% | 15% | 17% | 25% | 21% | 17% | 28% |
| Promote inclusion, unity, belonging, social networking | 19% | 14% | 22% | 13% | 21% | 12% | 17% |
| Promote enjoyment and good experiences | 16% | 16% | 15% | 21% | 16% | 23% | 16% |
| Produce results | 14% | 19% | 14% | 9% | 11% | 7% | 13% |
| Prepare the setting, facilitate activity | 13% | 15% | 13% | 13% | 9% | 17% | 9% |
| Instill motivation, inspire towards development and training | 12% | 14% | 11% | 13% | 15% | 18% | 10% |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Promote sport values and develop athlete as person | 7% | 6% | 8% | 6% | 8% | 6% | 8% |

**Table T. Approximate athlete age a coach can pick that the athlete can become exceptionally good**

| *Federation* | *before the age of 12* | *between 13 and 19* | *after the age of 20* | *not seen at any age* |
|---|---|---|---|---|
| All coaches | 18% | 56% | 6% | 20% |
| Athletics | 8% | 60% | 14% | 18% |
| Football | 19% | 61% | 3% | 17% |
| Gymnastics | 53% | 26% | 1% | 20% |
| Handball | 10% | 65% | 7% | 18% |
| Ski | 5% | 66% | 12% | 17% |
| Swimming | 26% | 48% | 3% | 24% |

**Table U. Period when their coaching certification was attained**

| *Federation* | *until 1997* | *between 1998 -2010* | *after 2011* |
|---|---|---|---|
| All coaches | 14% | 22% | 64% |
| Athletics | 24% | 21% | 55% |
| Football | 14% | 20% | 66% |
| Gymnastics | 15% | 24% | 61% |
| Handball | 15% | 25% | 60% |
| Ski | 14% | 24% | 62% |
| Swimming | 11% | 23% | 66% |

**Table V. Learning mode preference for attaining further education and training in coaching**

| | *ALL* | *Athletics* | *Football* | *Gymnastics* | *Handball* | *Ski* | *Swimming* |
|---|---|---|---|---|---|---|---|
| In classroom, weekend course | 32% | 38% | 28% | 41% | 32% | 30% | 40% |
| Combination of in classroom and online | 20% | 31% | 15% | 24% | 23% | 29% | 23% |
| Combination of in classroom, online, one-to-one tutoring | 16% | 14% | 14% | 15% | 14% | 20% | 16% |
| In classroom, evening course | 14% | 0% | 24% | 1% | 18% | 6% | 1% |
| Online course | 5% | 5% | 6% | 7% | 5% | 2% | 7% |
| Guided practice/mentoring | 5% | 0% | 6% | 6% | 3% | 5% | 4% |
| In classroom, day-time course | 5% | 4% | 5% | 3% | 2% | 5% | 7% |
| One-to-one tutoring | 1% | 4% | 1% | 1% | 1% | 0% | 3% |
| I do not know what I prefer | 2% | 4% | 1% | 2% | 3% | 5% | 1% |

**Table X. Mean scores and standard deviations of thematic areas coaches where perceived a need for more education and training**

| | *ALL* | *Athletics* | *Football* | *Gymnastics* | *Handball* | *Ski* | *Swimming* |
|---|---|---|---|---|---|---|---|
| Sport specifics | 4.26(0.95) | 4.32(0.87) | 4.14(0.97) | 4.30(1.03) | 4.39(0.87) | 4.41(0.84) | 4.40(0.98) |
| Planning of training and competition | 3.92(1.10) | 4.18(0.99) | 3.93(1.05) | 3.66(1.29) | 4.06(1.00) | 4.03(0.98) | 3.87(1.23) |
| Leadership and communication | 3.79(1.14) | 3.58(1.14) | 3.77(1.13) | 3.73(1.19) | 3.85(1.15) | 3.84(1.12) | 3.81(1.19) |
| Sport psychology, pedagogy, didactics | 3.71(1.18) | 3.89(0.98) | 3.56(1.20) | 3.73(1.25) | 3.81(1.14) | 3.84(1.07) | 3.94(1.18) |
| Code of conduct, bullying, harassment | 3.60(1.21) | 3.36(1.19) | 3.57(1.19) | 3.69(1.28) | 3.75(1.16) | 3.37(1.25) | 3.72(1.24) |
| Fair play, ethics, morality | 3.42(1.23) | 3.19(1.23) | 3.40(1.20) | 3.35(1.36) | 3.63(1.20) | 3.31(1.19) | 3.46(1.30) |
| Health and life-style | 3.33(1.15) | 3.44(1.06) | 3.22(1.14) | 3.50(1.21) | 3.35(1.14) | 3.42(1.11) | 3.57(1.17) |
| Physiology, anatomy, biomechanics | 3.31(1.23) | 3.75(1.05) | 3.13(1.20 | 3.47(1.26) | 3.42(1.24) | 3.45(1.23) | 3.69(1.25) |
| Nutrition and hydration | 3.31(1.16) | 3.46(1.04) | 3.20(1.16) | 3.30(1.25) | 3.35(1.13) | 3.56(1.11) | 3.53(1.24) |
| Management | 2.58(1.32) | 2.43(1.19) | 2.49(1.32) | 2.78(1.33) | 2.49(1.30) | 2.57(1.26) | 2.78(1.37) |
| Planning of events | 2.45(1.23) | 2.39(1.10) | 2.32(1.17) | 2.76(1.30) | 2.40(1.22) | 2.39(1.08) | 2.65(1.35) |
| Finances and business matters | 2.19(1.16) | 2.19(1.09) | 2.05(1.10) | 2.38(1.21) | 2.121.13) | 2.22(1.10) | 2.45(1.30) |
| How media works | 2.08(1.18) | 2.32(1.11) | 1.90(1.10) | 2.17(1.21) | 1.99(1.15) | 2.27(1.13) | 2.29(1.28) |

**Table Y. Mean scores and standard deviations of learning sources used in the past with perceived impact on the coaches (scored above the median, i.e., the middle score of 3)**

| | *ALL* | *Athletics* | *Football* | *Gymnastics* | *Handball* | *Ski* | *Swimming* |
|---|---|---|---|---|---|---|---|
| Feedback I receive from athletes/players | 3.85(0.98) | 4.06(0.85) | 3.66(1.01) | 3.99(0.98) | 3.89(0.89) | 4.02(0.89) | 3.98(1.05) |
| Working with or observing other coaches | 3.82(1.04) | 3.85(1.00_ | 3.72(1.05) | 4.15(0.97) | 3.82(1.06) | 3.76(1.02) | 3.99(1.04) |
| Reflection on own and others coaching practice | 3.81(0.98) | 3.82(1.02) | 3.75(0.99) | 3.87(1.01) | 3.84(0.93) | 3.94(0.90) | 3.81(1.03) |
| Testing and experimenting with own ideas | 3.73(1.03) | 3.75(0.99) | 3.66(1.03) | 3.76(1.07) | 3.69(1.00) | 3.63(1.05) | 3.94(1.00) |
| Traditional education | 3.48(1.26) | 3.49(1.14) | 3.28(1.29) | 3.82(1.22) | 3.41(1.30) | 3.84(1.02) | 3.90(1.16) |
| Material I read | 3.00(1.23) | 3.69(0.98) | 2.81(1.23) | 3.02(1.30) | 2.93(1.20) | 3.21(1.12) | 3.25(1.22) |

**Table Z. Future goals as coaches**

| | *To develop my coaching* | *To be certified, licensed* | *No specific goal* | *Other* |
|---|---|---|---|---|
| All coaches | 60% | 4% | 25% | 11% |
| Athletics | 65% | 2% | 16% | 17% |
| Football | 54% | 5% | 30% | 11% |
| Gymnastics | 66% | 3% | 22% | 9% |
| Handball | 66% | 4% | 19% | 11% |
| Ski | 65% | 1% | 21% | 13% |
| Swimming | 68% | 6% | 20% | 6% |

## Note

The PROCON project was co-financed by the Norwegian Olympic and Paralympic Committee and Confederation of Sports and Inland Norway University of Applied Sciences.

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