



# The Need to Psychological Screening of Para Athletes

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# Who am I? where I work? What I do?



- Emeritus Psychology professor;
- Head of sport psychology commission at NOC;
- Director of sport psychology center at NOPA.
- Member of eligibility panel in INAS

# What I am to talk about

## From a psychological viewpoint:

- What sport involvement brings for para athlete
- What challenges para athletes encounter in sport
  - What need to be controlled
  - What need to be considered
- The way to manage psychological stress in para athletes
- What are the experiences of IOC
- How a preliminary study carried out
- What we learnt from it
- Suggestions

# Sport involvement provides opportunities to:



Explore  
abilities



Develop  
social  
relationships



Experience  
success



Satisfy need  
for belonging



Experience  
joy

which all are valuable for para athletes (Cheon, Reeve, Lee, & Lee, 2015)

# Sport involvement also improves



Coping  
styles  
(Campbell and  
Jones, 2002)



Motivation  
(Wu and  
Williams,  
2001)



Personality  
and mood  
(Martin, Malone,  
and Hillyer,  
2011)



Sport  
identity  
(Huang &  
Brittain, 2006)



Post-  
traumatic  
growth  
(Crawford,  
Gayman, Tracey,  
2014)



Mental  
skills (Martin  
and Malone,  
2013)

These studies helped to appreciate some aspects of athletic qualities.

# What has been studied:



Managing  
life



Self-  
efficacy



Functional  
skills



Self-  
esteem



Self -  
confidence

Greenwood, Dzewaltowski, & French (1990); Reardon (2019)

# We need to consider the risk of



Injury



Overtraining



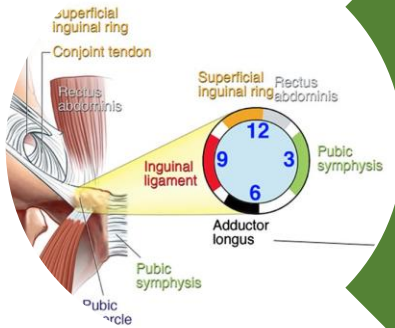
Burnout



Anxiety

which affect para athletes' health and well-being (Kenta and Corban, 2014).

# We also need to consider controlling



## Chronic pain

(Martin, 2017)



## Sleep disturbance

# And challenges they usually face in:

City  
transportation

Air  
travelling

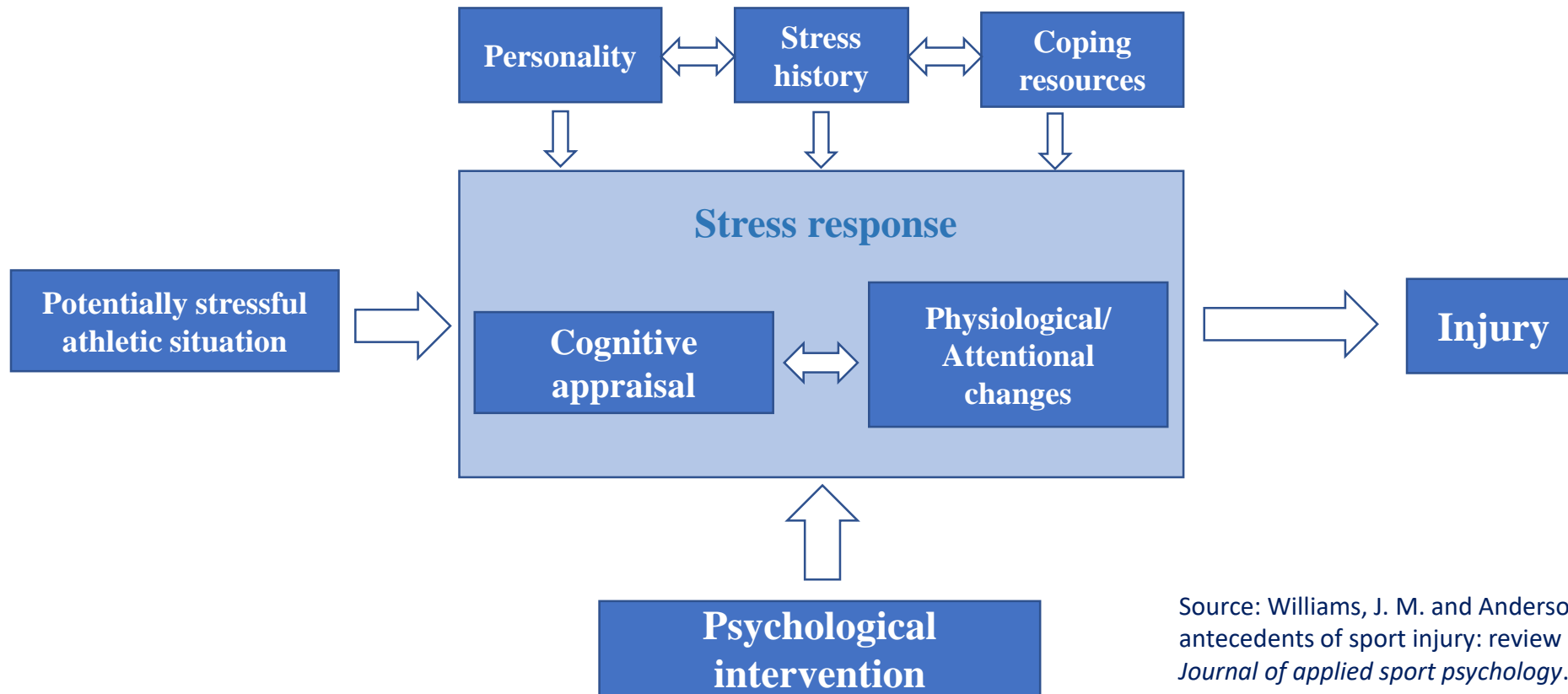
Living in  
camps

Dealing with  
pressure  
sores

McCann (1996)



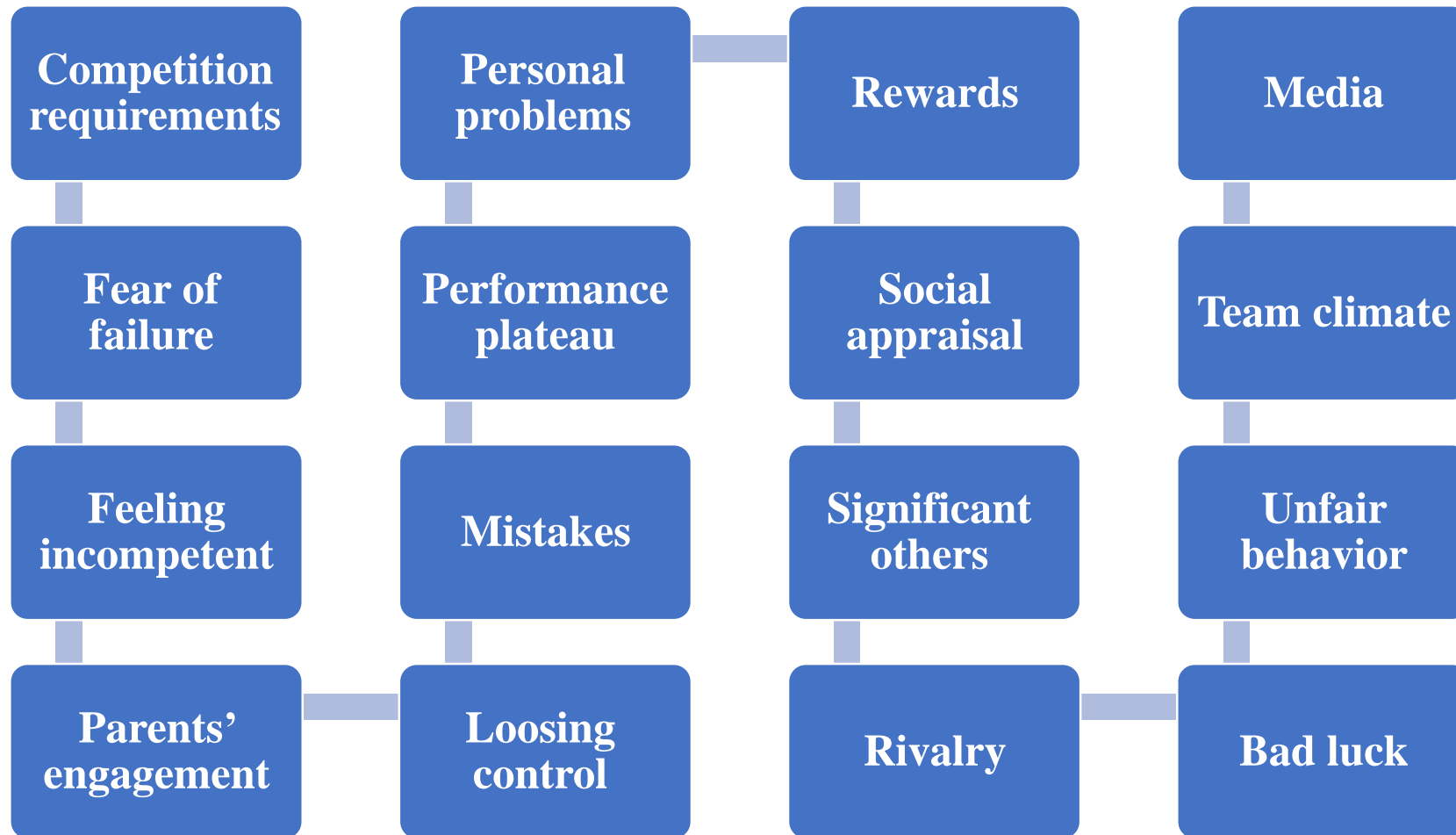
Therefore they may face psychological stress (Campbell and Jones, 2002).



Source: Williams, J. M. and Anderson, M. B. (1998). Psychological antecedents of sport injury: review and critique of sport injury model. *Journal of applied sport psychology*. 10 (1), 5-25.

# We should not ignore other sources of stress

(Silva, Cornelius, Conroy, Petersen, and Finch (1996))



# Athletes are not in control of:



Practice (type, duration, intensity, place...)



Selection of athletes



Nutrition (What, when, and how much to eat)

*These limitations  
affect self-esteem*

A skier is seen from behind, wearing a red and black racing suit with 'Alpecin' and Arabic text on the back. They are using ski poles and are on a snowy slope. Other skiers are visible in the background.

# **The common understanding is**

**Many athletes are not prepared to cope with the emotional load accompanied with high level of involvement in sport**

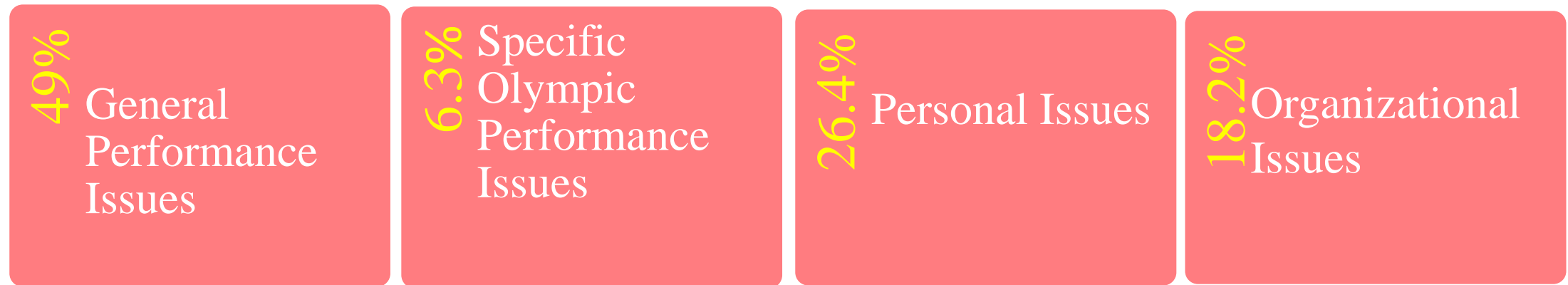
# Sometimes, gender, would be also a challenge for para athletes

- In some cultures, female sport is not of significance and is not considered as part of feminine values and competences (Shakespeare, Gillespie-Sells, Davies, 1996).



# What have been found in three Olympics

(Turin, 2006; Beijing, 2008, Vancouver, 2010)



Birrer, Wetzel, Schmid, Morgan (2012)

# We know about Olympic athletes

## Reardon (2019)

- Sleep disorders and sleep concerns
- Major depressive disorder and depression symptoms
- Suicide
- Anxiety and related disorders
- PTSD and other trauma-related disorders
- Eating disorders
- ADHD
- Bipolar and psychotic disorders
- Substance use and substance use disorders
- Behavioral addictions similar to gambling disorder

# Mental health in elite athletes: International Olympic Committee consensus statement (2019)

Claudia L Reardon,<sup>1</sup> Brian Hainline,<sup>2</sup> Cindy Miller Aron,<sup>3</sup> David Baron,<sup>4</sup> Antonia L Baum,<sup>5</sup> Abhinav Bindra,<sup>6</sup> Richard Budgett,<sup>7</sup> Niccolo Campriani,<sup>8</sup> João Mauricio Castaldelli-Maia,<sup>9,10</sup> Alan Currie,<sup>11,12</sup> Jeffrey Lee Derevensky,<sup>13</sup> Ira D Glick,<sup>14</sup> Paul Gorczynski,<sup>15</sup> Vincent Gouttebarger,<sup>16,17</sup> Michael A Grandner,<sup>18</sup> Doug Hyun Han,<sup>19</sup> David McDuff,<sup>20</sup> Margo Mountjoy,<sup>21,22</sup> Aslihan Polat,<sup>23,24</sup> Rosemary Purcell,<sup>25,26</sup> Margot Putukian,<sup>27,28</sup> Simon Rice,<sup>29,30</sup> Allen Sills,<sup>31,32</sup> Todd Stull,<sup>33</sup> Leslie Swartz,<sup>34</sup> Li Jing Zhu,<sup>35,36</sup> Lars Engebretsen<sup>37,38</sup>

For numbered affiliations see end of article.

## Correspondence to

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## ABSTRACT

Mental health symptoms and disorders are common among elite athletes, may have sport related manifestations within this population and impair performance. Mental health cannot be separated from physical health, as evidenced by mental health symptoms and disorders increasing the risk of physical injury and

- ▶ to review the literature describing and establishing recommendations for non-pharmacological and pharmacological management of mental health symptoms and disorders in elite athletes
- ▶ to provide recommendations on how to minimise negative impacts of the sport environment

# A recent review about Paralympians (Swartz, Hunt, Bantjes, Hainline, Reardon, 2019)

**665**  
**publications**



**7**  
**Mental health**

- Small in scale
- Narrow range of symptoms
- Few countries

# Mental health symptoms and disorders in Paralympic athletes: a narrative review

Leslie Swartz,<sup>1</sup> Xanthe Hunt,<sup>2</sup> Jason Bantjes,<sup>2</sup> Brian Hainline,<sup>3</sup> Claudia L Reardon<sup>4</sup>

► Additional material is published online only. To view please visit the journal online (<http://dx.doi.org/10.1136/bjsports-2019-100731>).

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## ABSTRACT

**Objectives** This narrative review summarises the literature on the mental health of Paralympic athletes, explores possible reasons for the paucity of research in this area and suggests directions for future research.

**Methods** A systematic search of PubMed, PsycINFO, Cumulative Index to Nursing and Allied Health Literature, SPORTDiscus, Scopus, and Cochrane databases was conducted using search terms related to disability, sport and mental health.

**Results** The search yielded 665 publications. Of these, 129 were duplicates, resulting in 536 publications identified for initial screening. A total of 72 publications were to be relevant at initial screening. Only seven publications addressed Paralympic athletes specifically. Of these papers, three included measures of depression and three included measures of anxiety. In the studies that were not concerned with mental health symptoms or disorders, the focus of enquiry included identity and self, stress, and well-being.

**Conclusion** Most of the studies reviewed are small in scale, and there are almost no comparative data on Paralympic versus Olympic athletes. There is a paucity of data on rates of mental health symptoms and disorders in this population and the factors that might contribute to poor mental health among elite athletes with disabilities. We propose that stereotypes about people with disabilities—and the disability rights movement's rightful reaction to these stereotypes—have created barriers to mental health research among Paralympic athletes. There is a need for enquiry into the differential stressors experienced by Paralympic athletes, including trauma, transition out of sport, sport and personhood, and the potential for disability sport to promote

## What is already known

- Social forces that differentially affect people with disabilities, as well as the demands of high-level sports performance, could put Paralympic athletes at risk for mental health symptoms and disorders.

## What are the new findings

- It is possible that certain stereotypes about people with disabilities—and the disability rights movement's rightful reaction to these stereotypes—create barriers to mental health research among Paralympic athletes.
- There is a need for enquiry into the differential stressors experienced by Paralympic athletes, including trauma, transition out of sport, sport and personhood, and the potential for disability sport to promote psychological health.

had participated in Paralympic competition was warranted. Second, there are specific pressures that impact Paralympic athletes, as opposed to other elite athletes with disabilities, which might make enquiry into their mental health especially salient.

## METHODS

A systematic search of PubMed, PsycINFO, Cumulative Index to Nursing and Allied Health Literature, SPORTDiscus, Scopus, and Cochrane

# **Mental health symptoms and disorders in Paralympic athletes: a narrative review**

Leslie Swartz, Xanthe Hunt, Jason Bantjes, Brian Hainline, Claudia L Reardon (2019)

- Social forces that differentially affect people with disabilities, as well as the demands of high-level sports performance, could put Para-athletes at risk for mental health symptoms and disorders.

## **Mental health symptoms and disorders in Paralympic athletes: a narrative review**

Leslie Swartz, Xanthe Hunt, Jason Bantjes, Brian Hainline, Claudia L Reardon (2019)

- There is a marked lack of comparative data exploring differences in rates of mental health symptoms and disorders between Paralympic and Olympic athletes.
- It is thus difficult to draw firm conclusions about the mental health status and mental health needs of Paralympians from available evidence.

## **Mental health symptoms and disorders in Paralympic athletes: a narrative review**

Leslie Swartz, Xanthe Hunt, Jason Bantjes, Brian Hainline, Claudia L Reardon (2019)

- The only definitive conclusion that can be made from this review is that there is a clear need for more focused research on the mental health of Paralympians.

- There is not a management system for mental disorders in Paralympic

Why?

# Because of deficiencies in:

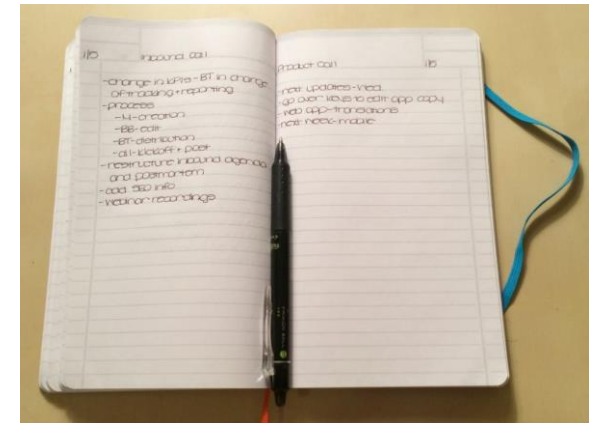
- Recruitment
- Intervention process



# Therefore,

It will be necessary to study/record psychological information both related to:

- Athletes' mental health, and
- Athletes' mental skills



## A database is made which remains for years

# How should we do it?

- Using Questionnaires/inventories
- Using a qualitative approach

Table 1 The final form questionnaire for screening of dementia

Question	Sensitivity (%)	Specificity (%)	PPV (%)
1 نسوان الأحداث القوية Forgetfulness of recent events.	87.9	64.7	70.7
2 يتحدث ذكر الأحداث البعيدة وخاصة الأحداث المهمة و يكرر ها Intend to mention and repeat the remote events especially the important ones.	90.9	88.2	88.2
3 اسم يكرر الحطب اكثر من مرة في اليوم الواحد ( اكثر من 3 مرات) اسم يكرر الحطب اكثر من مرة في اليوم الواحد ( اكثر من 3 مرات)	81.8	85.3	84.4

Please answer by using the tick boxes ☒  
– one tick for each question

Please note that this part of the questionnaire should be answered, even if you have never had trouble in any parts of your body.

Have you at any time during the last 12 months had trouble (such as ache, pain, discomfort, numbness) in:	Have you had trouble during the last 7 days:	During the last 12 months have you been prevented from carrying out normal activities (eg. job, housework, hobbies) because of this trouble:
<b>1 Neck</b> No <input type="checkbox"/> Yes <input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/>	<b>2 Neck</b> No <input type="checkbox"/> Yes <input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/>	<b>3 Neck</b> No <input type="checkbox"/> Yes <input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/>
<b>4 Shoulders</b> No <input type="checkbox"/> Yes <input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> in the right shoulder 3 <input type="checkbox"/> in the left shoulder 4 <input type="checkbox"/> in both shoulders	<b>5 Shoulders</b> No <input type="checkbox"/> Yes <input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> in the right shoulder 3 <input type="checkbox"/> in the left shoulder 4 <input type="checkbox"/> in both shoulders	<b>6 Shoulders (both/either)</b> No <input type="checkbox"/> Yes <input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/>
<b>7 Elbows</b> No <input type="checkbox"/> Yes <input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> in the right elbow 3 <input type="checkbox"/> in the left elbow 4 <input type="checkbox"/> in both elbows	<b>8 Elbows</b> No <input type="checkbox"/> Yes <input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> in the right elbow 3 <input type="checkbox"/> in the left elbow 4 <input type="checkbox"/> in both elbows	<b>9 Elbows (both/either)</b> No <input type="checkbox"/> Yes <input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/>
<b>10 Wrists/hands</b> No <input type="checkbox"/> Yes <input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> in the right wrist/hand 3 <input type="checkbox"/> in the left wrist/hand 4 <input type="checkbox"/> in both wrists/hands	<b>11 Wrists/hands</b> No <input type="checkbox"/> Yes <input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> in the right wrist/hand 3 <input type="checkbox"/> in the left wrist/hand 4 <input type="checkbox"/> in both wrists/hands	<b>12 Wrists/hands (both/either)</b> No <input type="checkbox"/> Yes <input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/>
<b>13 Upper back</b> No <input type="checkbox"/> Yes <input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/>	<b>14 Upper back</b> No <input type="checkbox"/> Yes <input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/>	<b>15 Upper back</b> No <input type="checkbox"/> Yes <input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/>
<b>16 Lower back (small of the back)</b> No <input type="checkbox"/> Yes <input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/>	<b>17 Lower back</b> No <input type="checkbox"/> Yes <input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/>	<b>18 Lower back</b> No <input type="checkbox"/> Yes <input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/>
<b>19 One or both hips/thighs/buttocks</b> No <input type="checkbox"/> Yes <input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/>	<b>20 Hips/thighs/buttocks</b> No <input type="checkbox"/> Yes <input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/>	<b>21 Hips/thighs/buttocks</b> No <input type="checkbox"/> Yes <input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/>
<b>22 One or both knees</b> No <input type="checkbox"/> Yes <input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/>	<b>23 Knees</b> No <input type="checkbox"/> Yes <input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/>	<b>24 Knees</b> No <input type="checkbox"/> Yes <input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/>
<b>25 One or both ankles/feet</b> No <input type="checkbox"/> Yes <input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/>	<b>26 Ankles/feet</b> No <input type="checkbox"/> Yes <input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/>	<b>27 Ankles/feet</b> No <input type="checkbox"/> Yes <input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/>

Figure 2 Musculoskeletal questionnaire

# This is done in Iran NPC

## On 60 para-athletes

• Including criteria:

- 1) being a member of a national team;
- 2) participation in Rio Paralympic games (2016), or Incheon Para-Asian games (2014), or London Paralympic games (2012), or Guangzhou Para-Asian games (2010); and
- 3) participation in Jakarta Para-Asian games (2018) training camps.

Demographics		N
Gender	Men	40
	Women	20
Age	18-24	20
	25-34	27
	35-44	12
	45-49	1
Educational status	High school Diploma	31
	Bachelor	24
	Master	5
Marital status	Single	24
	Married	27
	Engaged	5
	Divorced	4
Sport	Individual sport	36
	Team sport	24
Nature of impairment	Acquired	45
	Congenital	15
Type of impairment	Limb loss or deficiency (e.g., amputee)	15
	Muscle weakness (e.g., spinal cord injury, spina bifida, muscular dystrophies)	16
	Hypertonia, or dystonia (e.g., cerebral palsy)	3
	visually impaired	26

# Instrument

A quasi-structured interview method was used in this study.

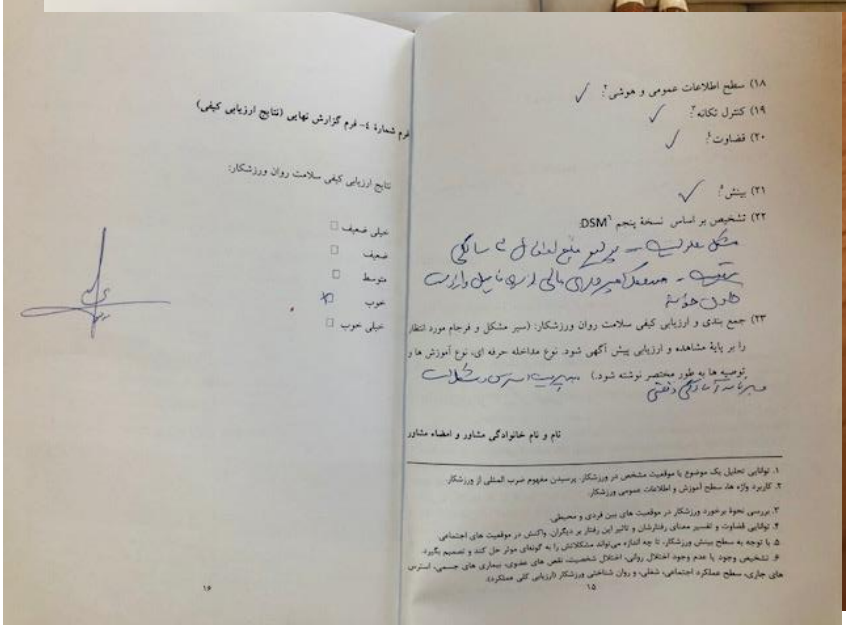
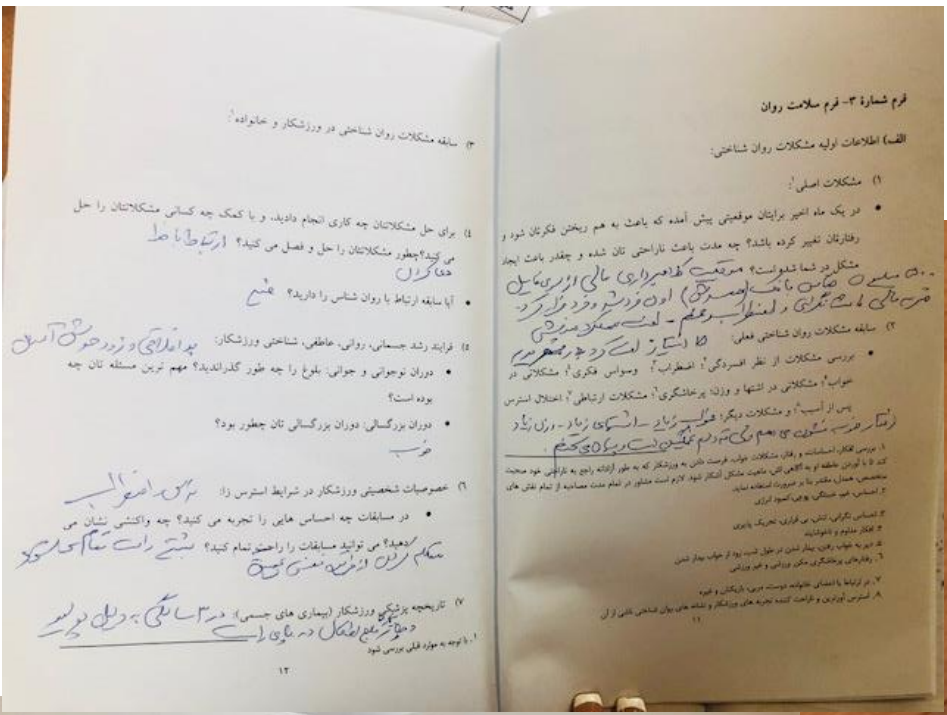
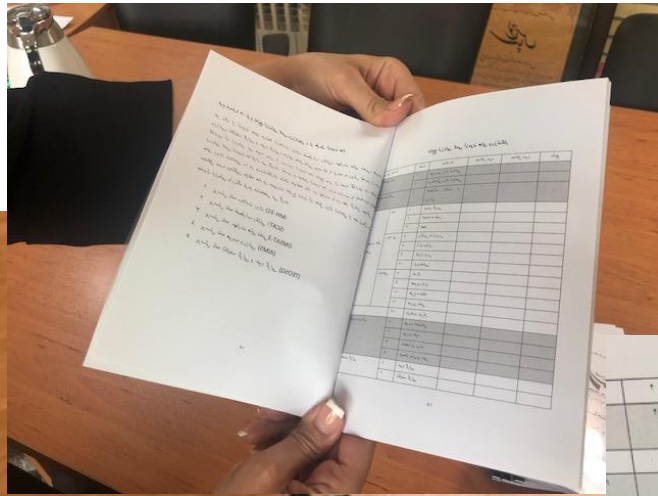
Stage 1. questions on family history and the history of participation in professional sport; containing questions aimed to make rapport with the athlete.

Stage 2, included in-depth interview, pursuing athletes' attitudes towards themselves and their sport experiences.

۱۴. از یک ماه گذشته تا به امروز،	۱	۲	۳	۴	تا چه اندازه دوست داشتید تجربه کنید؟
۱۵. از یک ماه گذشته تا به امروز،	۱	۲	۳	۴	تا چه اندازه احساس کردید این کار هر دو به نفع دیگران از دست شما باعث می شد؟
۱۶. از یک ماه گذشته تا به امروز،	۱	۲	۳	۴	تا چه حد به راحتی می توانستید خودتان را آرام کنید؟
۱۷. از یک ماه گذشته تا به امروز،	۱	۲	۳	۴	تا چه اندازه توانستید با دیگران کاملاً دوستانه و صمیمی بوده است؟
۱۸. از یک ماه گذشته تا به امروز،	۱	۲	۳	۴	تا چه اندازه احساس کردید اوضاع بر وفق شما نیست؟
۱۹. از یک ماه گذشته تا به امروز،	۱	۲	۳	۴	تا چه اندازه به خاطر جسمانی بودن کار لذت بردید؟
۲۰. از یک ماه گذشته تا به امروز،	۱	۲	۳	۴	تا چه اندازه زندگی شما جذاب و هیجانی بوده است؟
۲۱. از یک ماه گذشته تا به امروز،	۱	۲	۳	۴	تا چه اندازه احساس کردید هیچ چیزی نمی تواند شما را خوشحال کند؟
۲۲. از یک ماه گذشته تا به امروز،	۱	۲	۳	۴	تا چه حد فکر می کنید به دنبال رسیدن است که به نفع دیگران منتهی می شود؟
۲۳. از یک ماه گذشته تا به امروز،	۱	۲	۳	۴	تا چه حد احساس می کردید بی قراری می کردید؟
۲۴. از یک ماه گذشته تا به امروز،	۱	۲	۳	۴	تا چه حد احساس می کردید ناراحت و سردگرمی هستید؟
۲۵. از یک ماه گذشته تا به امروز،	۱	۲	۳	۴	تا چه حد شاد و بخشنده بودید؟
۲۶. از یک ماه گذشته تا به امروز،	۱	۲	۳	۴	تا چه حد ناراحت و غمگین بودید؟
۲۷. از یک ماه گذشته تا به امروز،	۱	۲	۳	۴	تا چه حد دچار اضطراب و نگرانی هستید؟
۲۸. از یک ماه گذشته تا به امروز،	۱	۲	۳	۴	تا چه حد احساس می کردید بی قراری می کردید؟
۲۹. از یک ماه گذشته تا به امروز،	۱	۲	۳	۴	تا چه حد احساس می کردید نمی توانید خودتان را آرام کنید؟

خواهشمند است با کشیدن دایره دور یکی از اعداد ۱ تا ۴ احساس خود را در طی یک ماه گذشته مشخص کنید.

۱. از یک ماه گذشته تا به امروز،	۱	۲	۳	۴	چقدر احساس ناشی و رهایی داشته اید؟
۲. از یک ماه گذشته تا به امروز،	۱	۲	۳	۴	چقدر توانستید با مهارت های خود بر مشکلات و دشواری ها غلبه کنید؟
۳. از یک ماه گذشته تا به امروز،	۱	۲	۳	۴	تا چه حد زندگی روزانه شما جذاب و هیجانی بوده است؟
۴. از یک ماه گذشته تا به امروز،	۱	۲	۳	۴	تا چه اندازه فکر می کردید این کار هر دو به نفع دیگران منتهی می شود؟
۵. از یک ماه گذشته تا به امروز،	۱	۲	۳	۴	تا چه اندازه احساس می کردید بی قراری می کردید؟
۶. از یک ماه گذشته تا به امروز،	۱	۲	۳	۴	تا چه حد احساس می کردید ناراحت و سردگرمی هستید؟
۷. از یک ماه گذشته تا به امروز،	۱	۲	۳	۴	تا چه حد شاد و بخشنده بودید؟
۸. از یک ماه گذشته تا به امروز،	۱	۲	۳	۴	تا چه حد ناراحت و غمگین بودید؟
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۱۲. از یک ماه گذشته تا به امروز،	۱	۲	۳	۴	تا چه حد احساس می کردید این کار هر دو به نفع دیگران منتهی می شود؟



# What did we find?

- A number of 280 preliminary codes were obtained; following consolidation of analogous ones, 23 codes were confirmed, categorized in four categories:
- 1. Needs for Consultations,
- 2. Athletic Identity,
- 3. Mental Skills, and
- 4. Relationships.

# What did we find?

## 1. Need for consultation

- Communication problems,
- Family complications,
- Performance stress,
- Concentration vulnerability
- Sleep disturbance,
- Depression,
- ADHD,
- And PTSD.



# What did we find?

## 2. Athletic Identity

- Passion,
- Determination,
- Self-esteem,
- Maturity, and
- Mental toughness



# What did we find?

## 3. Mental skills

- Proper goal setting,
- Good self-confidence,
- Skill awareness,
- Good concentration,
- Managing stress,
- Imagery ability,
- Positive self-talk



# What did we find?

## 4. relationships

- Good relationship with coach,
- Good relationship with family, and
- Good relation to God

# What would be the use of this information?



- Provide better understanding of the coping styles athletes choose;
- Could be used in training young sport psychologists;
- Help newly employed psychologists to put emphasis on the most important issues;
- Help to signify brief contact consultations;
- Signify after competition consultation.

Of course, there are more efficient ways to do it!



# Suggestions!

- If the common sense implicates that psychological management of para athletes is beneficiary, then there would be ways to do it globally.
  - Replicating what IOC did
  - Upgrading IPC's medical code, adding some goals concerning mental health of para athletes and also adding psychologists in it.

# Thank you

Your comments are most welcome!