

## Incidència de la trajectòria esportiva en el desenvolupament del lideratge

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<http://hdl.handle.net/10803/687214>

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## TESI DOCTORAL

Títol	Incidència de la trajectòria esportiva en el desenvolupament del lideratge
Realitzada per	Verònica Riera Batalla
en el Centre	Facultat de Psicologia, Ciències de l'Educació i de l'Esport Blanquerna
i en el Departament	Ciències de l'Activitat Física i l'esport
Dirigida per	Dr. Xavier Pujadas Martí i Dra. Marta Moragas Rovira



A l'Adri, la Fiona i l'Hèctor,  
"Whatever you decide to do,  
make sure it makes you happy"

---

La Facultat de Psicologia, Ciències de l'Educació i de l'Esport Blanquerna, Universitat Ramon Llull, ha atorgat una beca de recerca per per a la realització de l'estada de recerca a la Université de Lausanne (UNIL) a Lausanne, Suïssa

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## Agraïments

El dia que em vaig plantejar fer aquesta tesi no era plenament conscient del camí que iniciava i de tot el que comportava. T'ho expliquen, t'avisen, t'aconsellen, però fins que no hi ets, fins que no t'hi trobes no te'n adones de a què es referien. Es tracta d'un llarg camí, però un camí ple de paisatges ben diferents. A vegades, amb sol i alegres en els quals tot flueix, altres amb núvols o boira que no deixen acabar de veure bé el destí al que et dirigeixes, o bé, d'altres vegades amb fred i pluja que et fan dubtar del sentit d'estar fent el camí. Però com bona amant de la muntanya i la natura, cada paisatge i estació té el seu encant i la seva funció, i el secret segurament està en saber gaudir de cada un d'aquests, escoltant i aprenent la lliçó que els acompanya. I, de la mateixa manera que al cim de la muntanya no s'hi arriba sol, arribar avui a presentar aquesta tesi és el resultat de la col·laboració de moltes persones a qui vull dedicar unes línies:

En primer lloc vull agrair als meus directors de tesi la Dra. Marta Moragas i el Dr. Xavier Pujadas el seu temps, coneixement i guiatge durant aquest camí. A la Dra. Marta Moragas pel seu acompanyament incondicional durant tot el procés i el seu feed-back constructiu i pràctic que m'han ajudat a anar posant fil a l'agulla en cada pas. Al Dr. Xavier Pujadas per transmetre'm calma i serenor a través del seu coneixement i experiència. I, al Dr. Joan M. Batista per acompanyar-me en aquest camí durant els inicis obrint-me la porta a la recerca quantitativa i el coneixement estadístic de forma pacient i amistosa.

Vull destacar l'agraïment a totes les persones que han participat en la recerca i que d'una forma desinteressada, han trobat temps per poder-me dedicar, ja sigui omplint els qüestionaris o bé compartint els qüestionaris entre els seus coneguts. Especialment, vull agrair als 17 mànagers entrevistats, no només el seu temps i disponibilitat per a fer l'entrevista, sinó, sobretot, les converses interessants i estimulants que hem arribat a tenir. És un dels grans regals que m'enduc d'aquesta tesi.

A la facultat de Blanquerna – FPCEE perquè després de tants anys entrant i sortint de les seves aules i despatxos m'hi sento com a casa. A tot l'alumnat que he anat tenint durant aquests anys per

motivar-me a ser la millor versió de mi a cada sessió. I al GRIES, per acollir-me i oferir-me l'oportunitat de ser-hi i col·laborar-hi com a becària durant un temps.

No em vull oblidar de tots els companys i companyes de l'aula C4-04 a l'inici i l'aula B4-02 els últims anys, que m'han acompanyat durant aquest procés i han fet la redacció d'aquestes línies molt més amena. Especialment, al Joan Aguilera i l'Oriol Sansano qui sempre han estat disposats a donar-me un cop de mà en tots els temes més tècnics. Al Marc Llinàs per les mil i una hores de conversa compartides plenes d'ànims i suport. I, la Marta Santiago, perquè és un repte compartit, ara et toca a tu acabar.

Per un altre costat, vull donar les gràcies a tots els amics i amigues que durant aquest temps heu sentit i patit directa o indirectament les conseqüències d'aquesta tesi. Ramon i Núria, sí, ara ja sí, finalment ja he acabat i podem seguir compartint molta més muntanya. Berta, Surri, Moi, Alba R., Edgar, Núria, Maria, Bet, Juan, Rubs, Kim, Alba T. i Gabri això ja està, la propera vegada que em pregunteu ja podré dir que sí, que s'ha acabat! Junks, Cèlia, Eva, Gemma, Júlia i Adriana al proper sopar ja podem brindar per un objectiu més assolit de les divines. I, Laura sí, aquest dia ha arribat...ja podem brindar!

Vull agrair especialment i amb molta estima a la Marta el suport incondicional acompanyat d'una paciència infranquejable que durant tots aquests anys m'has mostrat, així com les nombroses hores de conversa i debat entorn temes de la tesi (i altres). Gràcies a tu aquest llarg camí ha sigut molt més divertit. Gràcies per ser-hi sempre. Ara sí, ara ja podem dir que he acabat de veritat, ja ens ho podem creure i buscar data per celebrar-ho!

Amb molta estima i orgull vull donar les gràcies a la meva família qui sempre esteu allà en tots els moments, els qui m'heu fet ser com sóc i els qui sempre m'animeu i motiveu a lluitar pel que vull. Si avui estic escrivint aquestes línies és gràcies a vosaltres i a tot el que m'heu ensenyat. Mama, gràcies per ensenyar-me a aixecar-me cada vegada que he caigut així com la importància que s'amaga darrere de cada detall. Papa, gràcies per ensenyar-me a lluitar i no conformar-me. Adrià gràcies per ser el meu igual molt diferent. Sou un dels meus pilars.



A la Fiona, per cedir-me tot el temps que t'he robat per escriure aquestes línies. A l'Héctor per fer-me mil i una preguntes interessants i interessades, per ensenyar-me que la curiositat no té límits ni fronteres.

Finalment vull agrair d'una forma molt especial a l'Adri tot el suport i ajuda que m'has donat, has sigut la veu de la consciència quan ja no sabia què pensar i els meus ulls quan ja no hi veia més. Sense tu, aquest projecte no l'estaria presentant avui. Compartir la vida amb tu és la meva gran sort, que aquesta aventura no acabi mai. T'estimo.

Em sento molt afortunada i orgullosa d'haver comptat amb la vostra col·laboració i de saber que d'una manera o altre hi sou o hi heu estat. Aquesta tesi no és només meva sinó de tots vosaltres. A tots vosaltres, moltíssimes gràcies!

## Resum

Aquesta tesi doctoral es centra en analitzar la incidència de la trajectòria esportiva de les persones en el desenvolupament del seu lideratge a través de l'aproximació *Lifespan Developmental Psychology* (Baltes et al., 1980) i la teoria de desenvolupament del lideratge basat en l'experiència (McCall, 2010). La revisió de la literatura planteja com a objectiu principal l'anàlisi de l'existència de vincles entre la trajectòria esportiva i el desenvolupament del lideratge en una mostra de mànagers de Barcelona, i com a objectius secundaris: 1) Dissenyar i validar un instrument capaç de recopilar la trajectòria esportiva d'una persona de forma ràpida i autogestionada; 2) Identificar les similituds i diferències i els patrons entre la trajectòria esportiva d'una mostra de mànagers de Barcelona en relació a la trajectòria esportiva d'una mostra de la població catalana i 3) estudiar la influència de la trajectòria esportiva de la mostra de mànagers en el desenvolupament del lideratge que exerceixen.

Per donar resposta als objectius plantejats s'han realitzat tres estudis amb mètodes d'investigació diferents. El primer estudi consisteix en el disseny i validació d'un qüestionari, *Sports Trajectory Questionnaire (STQ)*, fàcil d'administrar en qualsevol moment i capaç de recollir informació sobre la seva pràctica esportiva al llarg de la vida d'una persona seguint l'aproximació *Lifespan Developmental Trajectory* (Baltes et al., 1980). El segon estudi analitza el perfil esportiu dels mànagers en comparació al perfil esportiu de la població general catalana a través de l'administració del qüestionari STQ a una mostra de 86 mànagers (23 dones i 63 homes) d'empreses de diferents sectors empresarials de Barcelona en comparació amb una mostra de 274 persones (127 dones i 147 homes) corresponents a la població general. Partint de les dades obtingudes, el tercer estudi analitza la influència de la pràctica esportiva realitzada al llarg de la vida en el desenvolupament d'habilitats i competències pel lideratge a través d'entrevistes en profunditat.

Els resultats del primer estudi mostren que l'STQ sembla ser un instrument eficaç per recollir dades sobre l'activitat física i la participació esportiva d'un individu en qualsevol moment de la vida des de la infància fins a l'edat adulta i generar perfils que permetin analitzar la relació entre alguns

elements de la trajectòria esportiva amb qualsevol altra variable. Els resultats del segon estudi, indiquen que existeixen diferències significatives entre les dues mostres. Els mànagers presenten una pràctica esportiva més constant i amb més presència del component competitiu al llarg de la trajectòria en la que predomina la pràctica d'esports individuals i col·lectius en comparació al perfil individual que predomina entre la població general. I, el tercer estudi, confirma la influència de la trajectòria esportiva en el desenvolupament d'habilitats i competències del lideratge a través de quatre factors: (1) perfil esportiu, (2) referents esportius, (3) competències, valors i habilitats i (4) experiències de diferents rols esportius desenvolupats al llarg de la seva vida.

A partir dels resultats obtinguts s'ha dissenyat un model teòric que recull i relaciona de quina manera la pràctica esportiva realitzada al llarg de la vida pot influenciar el desenvolupament d'habilitats i competències del lideratge seguint les diferents teories explorades al marc teòric. Finalment es proposen noves línies d'investigació i possibles implicacions pràctiques derivades de la recerca.

**Paraules clau:** Trajectòria esportiva; Lideratge; Lifespan; Transferència i desenvolupament

## Abstract

This doctoral dissertation focuses on analyzing the impact of people's athletic careers on leadership development through the Lifespan Developmental Psychology approach (Baltes et al., 1980) and the theory of leadership development based on experience (McCall, 2010). The main objective of the literature review is to analyze the existence of links between the sporting trajectory and the development of leadership in a sample of managers in Barcelona, and as secondary objectives: 1) To design and validate a capable instrument to compile a person's sporting career quickly and self-managed; 2) to identify the similarities and differences and patterns between the sporting trajectory of a sample of managers in Barcelona in relation to the sporting trajectory of a sample of the Catalan population and 3) to study the influence of the sporting trajectory of the sample of managers in the development of the leadership they exercise.

To respond to the set objectives, three studies have been carried out with different research methods. The first study consists in the design and validation of a questionnaire, Sports Trajectory Questionnaire (STQ), easy to administer at any time and able to collect information about their sport practice throughout the life of a person following the Lifespan Developmental Trajectory approach (Baltes et al., 1980). The second study analyzes the sports profile of managers compared to the sports profile of the Catalan general population through the administration of the STQ questionnaire to a sample of 86 managers (23 women and 63 men) of companies from different business sectors in Barcelona compared to a sample of 274 people (127 women and 147 men) corresponding to the general population. Based on the data obtained, the third study analyzes the influence of lifelong learning on the development of leadership skills and competencies through in-depth interviews.

The results of the first study show that the STQ appears to be an effective tool for collecting data on physical activity and sports participation of an individual at any time in life from childhood to adulthood and to generate profiles that allow to analyze the relation between some elements of the sport trajectory with any other variable. The results of the second study indicate that there are

significant differences between the two samples. Managers have a more consistent sport practice with a greater presence of the competitive component throughout the trajectory in which the practice of individual and collective sports predominates compared to the individual profile that predominates among the general population. And the third study confirms the influence of sports career in the development of leadership skills and competencies through four factors: (1) sports profile, (2) sports benchmarks, (3) skills, values and abilities and (4) experiences of different sports roles developed throughout his life.

Based on the results obtained, a theoretical model has been designed that collects and relates how the practice of sports carried out throughout life can influence the development of leadership skills and competencies following the different theories explored in the theoretical framework. Finally, new lines of research and possible practical implications of the research are proposed.

**Key words:** Sport trajectory; Leadership; Lifespan; Transference & development



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## **CAPÍTOL 1: INTRODUCCIÓ**

“Si fem el que sempre hem fet, no arribarem més enllà d’on sempre hem arribat”

(Senllé, 1992)



## Justificació de la recerca

### *Justificació personal*

Excel·lència, respecte i amistat. Aquests són els valors fonamentals de l'olimpisme i els pilars essencials que indirectament han guiat la recerca que aquí es presenta. Com a amant de l'esport he procurat construir la meua vida personal i professional al voltant d'aquest fins al punt que s'ha convertit en l'element clau que dóna sentit a la major part d'episodis de la meua trajectòria, tant personal com professional.

L'excel·lència d'actuar sempre de la millor manera, procurant guanyar si sorgeix l'oportunitat però sobretot participant, millorant, avançant i aprenent. La pràctica del tennis en les etapes inicials de la meua trajectòria esportiva em van ensenyar el significat de l'esforç, l'auto-control, l'ambició i la perseverança. Competències difícils d'assimilar però fàcilment identificables en un esport individual com aquest que tan bon punt et fa estimar-lo com témer-lo al mateix temps.

L'excel·lència de voler créixer i traslladar les competències assimilades a través de l'esport en d'altres àmbits que poc a poc van apareixent al llarg de la trajectòria gràcies a l'educació que he rebut i els estudis realitzats fins al punt d'iniciar una recerca que uneix els aspectes que més m'apassionen. L'excel·lència de voler conèixer més sobre l'esport, com s'organitza, com s'estructura, en definitiva, com es gestiona tot el sector esportiu. D'aquí neix la meua inquietud i interès per les organitzacions esportives i la seva gestió.

El respecte vers les persones, les normes i la societat en general. El tennis m'ha ensenyat el respecte vers l'oponent, vers la jugadora que en sap més i de la qual n'has d'aprendre i vers la que en sap menys i per la qual has de procurar ser un bon exemple. Valor fàcilment traslladable en d'altres àmbits (laboral, acadèmic, familiar...) on el respecte per totes les persones és essencial, tant d'aquelles que depenen de tu, com pels teus iguals, com per les persones que d'alguna manera tenen alguna responsabilitat sobre tu.

El respecte, ja no només cap al propi esport i les persones sinó també cap a mi mateixa, procurant ser fidel als meus pensaments i manera de ser, el qual en algun moment de la trajectòria

em porta a canviar el tennis pels esports de muntanya més en línia amb la meva persistent necessitat d'aportar i de contribuir d'alguna manera a fer entre tots un món més sostenible. D'aquí sorgeix l'interès més acotat de voler conèixer més sobre la cultura, els recursos humans i la psicologia de les organitzacions en general i les organitzacions esportives en particular.

I finalment, l'amistat. Valor essencial situat a l'epicentre de tota aquesta trajectòria i que m'encoratja a utilitzar l'esport com un vehicle formatiu i educatiu vers el desenvolupament humà que porti a una millor entesa entre les persones. L'amistat dels tennistes que em vaig trobar en etapes inicials, o bé l'amistat dels amants de l'esport de muntanya que avui dia m'envolten, com totes les altres amistats vinculades a la resta d'àmbits és el que dona sentit a la meva trajectòria en sí.

Amistat, d'aquí neix el meu interès vers les persones, la psicologia del desenvolupament humà i el lideratge. Quines són les competències vinculades al lideratge i com les desenvolupa l'ésser humà és un tema que em fascina i em desperta molt interès. A més, mantinc la il·lusòria però no impossible visió que si es demostra que la trajectòria esportiva incideix en el desenvolupament del lideratge, l'esport es revalori i en conseqüència adquireixi la importància que es mereix.

Excel·lència, respecte i amistat, valors fonamentals que han guiat l'interès d'aquesta recerca i han servit d'eix transversal per lligar en una sola investigació, tots els temes d'interès sorgits al llarg de la meva trajectòria de manera que em resulti apassionant fer una recerca que involucri aquests àmbits de coneixement.

### *Justificació temàtica*

En un món cada vegada més accelerat i exigent, el lideratge ha anat posicionant-se com a un dels eixos centrals dins el món empresarial. El nou paradigma social que ha anat emergent en la nostra societat englobat per un cotext de crisi sanitària, d'incertesa política i social i un inevitable i brusc canvi generacional en el que l'estabilitat no és una garantia i la innovació sembla ser el comodí resposta a cada pregunta, sorgeix la necessitat de trobar referents que puguin adaptar-se a aquests canvis i aportar la visió necessària que serveixi de font d'inspiració.



El lideratge sembla ser el factor clau per a l'estabilitat de molts sectors i és per això que ha estat àmpliament estudiat i definit des de diferents punts de vista per un gran nombre d'autors. Gardner (1998) ofereix un enfocament cognitiu sobre el lideratge que va més enllà de la bibliografia científic-social escrita fins al moment i que es resumeix en quatre categories: Poder, normes, públic i psicologia. De la mateixa forma que va fer l'autor, aquesta recerca parteix de la premissa que els líders existeixen i a més, són necessaris:

En cierto sentido, mi estudio es conservador; se construye sobre los presupuestos de que hay individuos llamados líderes, que tienen historias y metas, que se esfuerzan por alcanzarlas y que a veces tienen éxito en este intento. Esta postura inquietará a las personas de tipo más radical, que se preguntan si los líderes realmente influyen en los acontecimientos, si a los líderes se les debería permitir de hecho influir en los acontecimientos, o si la concepción misma de liderazgo merece sobrevivir. Aun reconociendo el atractivo retórico de tales relatos, no los encuentro convincentes a la luz de la biología humana y a la historia de la humanidad. Invito a quienes cuestionen esta empresa a ofrecer sus propios relatos sin líder del éxito del Proyecto Manhattan, del curso inicial del movimiento por los derechos civiles o de la obtención de la independencia de la India. (Gardner, 1998, p.35)

La importància del líder i el lideratge i l'interès atractiu que genera en diferents àmbits d'aplicació han provocat l'existència de nombrosa literatura entorn el tema, motiu pel qual resulta essencial acotar el contingut a tractar. Aquesta recerca es centra en analitzar el lideratge des del punt de vista del desenvolupament humà. És a dir, què fa al líder, partint de la premissa que el líder no neix sinó que es desenvolupa a través d'unes habilitats que va adquirint al llarg de la vida (Day, 2000), i com aquest, exerceix el seu lideratge, partint del postulat que el lideratge requereix d'algun tipus de relació interpersonal per existir. Per tant, un líder sense context social, simplement no pot existir (Day i Harrison, 2007). La taula 1 (Day, 2000) mostra la diferència entre el desenvolupament del líder i el

desenvolupament del lideratge. A diferència del capital humà (desenvolupament del líder), en el que l'enfocament està en el desenvolupament de coneixement, habilitats i competències individuals, l'èmfasi en el capital social (desenvolupament del lideratge) està en la construcció de relacions en xarxa entre individus que millorin la cooperació i l'intercanvi de recursos en la creació de valor organitzacional (Day, 2000).

**Taula 1**

*Resum de les diferències entre desenvolupament del líder i desenvolupament del lideratge*

Dimensions de comparació	Objectiu de desenvolupament	
	Líder	Lideratge
Tipus de capital	Humà	Social
Model de lideratge	<i>Individual</i>	<i>Relacional</i>
	<i>Poder personal</i>	<i>Compromís</i>
	<i>Coneixement</i>	<i>Respecte</i>
	<i>Integritat</i>	<i>Confiança</i>
Competència bàsica	Intra-personal	Inter-personal
Competències	Consciència d'un mateix	Consciència social
	<i>Consciència emocional</i>	<i>Empatia</i>
	<i>Confiança en un mateix</i>	<i>Orientació al servei</i>
	<i>Autoimatge precisa</i>	<i>Consciència política</i>
Autoregulació	Habilitats socials	
	<i>Autocontrol</i>	<i>Crear lligams</i>
	<i>Integritat</i>	<i>Orientació d'equip</i>
	<i>Responsabilitat personal</i>	<i>Catalitzador de canvis</i>
Adaptabilitat		<i>Gestió del conflicte</i>
	Auto-motivació	
	<i>Iniciativa</i>	
	<i>Compromís</i>	
	<i>Optimisme</i>	

*Nota:* De Day, D. V. (2000). Leadership development: A review in context. *The leadership quarterly*, 11(4), 581-613. Drets d'autor 2001 per la revista Elsevier Science Inc. Reproduït amb permís. ([https://doi.org/10.1016/S1048-9843\(00\)00061-8](https://doi.org/10.1016/S1048-9843(00)00061-8))

Al llarg de la història hi hagut nombrosos científics de diferents àmbits acadèmics que han postulat teories amb la finalitat d'explicar el mecanisme a través del qual es desenvolupa un líder. El resultat d'aquesta recerca contínua ha portat al postulat de 8 grups de teories: La teoria del "Gran Home", la qual assumeix que la capacitat del líder és inherent i per tant el líder neix i no creix; les teories de trets, que basa el seu contingut en que hi ha determinades característiques de la persona que porten al desenvolupament del lideratge; les teories de contingència, les quals s'enfoquen en determinar quin és el millor estil de lideratge en cada situació en funció de determinades variables; les teories situacionals, similars a l'anterior, també es centren en determinar quin és el millor estil de lideratge en cada situació, a diferència de l'anterior, però, en aquest cas és el líder el que ha d'adaptar o triar l'estil de lideratge en funció de la situació mentre que en les teories de contingència afirma que hi ha un líder concret per a cada situació.

Les teories del comportament postulen que els líders es fan i no neixen, és la posició totalment oposada a la Teoria del Gran home. Les teories de participació, en canvi, suggereixen que el millor líder és aquell que adopta l'estil de lideratge que té en compte les opinions de la resta. Les teories de gestió o transaccionals, basen el lideratge en un sistema de recompenses i càstigs aplicat a la gestió de negocis en que el líders organitzen i supervisen als seus treballadors centrant-se en el rendiment del grup per assolir els objectius establerts. Finalment, les teories de relació o transformacionals, es centren en la relació del líder amb els seguidors a través d'influenciar, motivar o inspirar al grup per aconseguir un objectiu comú sent conscients de la importància de la tasca individual de cadascú.

Paral·lelament a totes les teories, hi ha nombrosos estudis que profunditzen en la investigació del lideratge des d'una característica o dimensió concreta. Durant molts anys, l'associació entre la personalitat i el lideratge ha estat àmpliament reconeguda (Hogan i Caser, 2005), sobretot la personalitat vinculada al model de personalitat *Big Five (Big Five Model)* en el que s'estableix una taxonomia pels trets de personalitat a través d'una anàlisi factorial. Aquest model identifica cinc factors: apertura a les noves experiències, responsabilitat, extraversió, amabilitat i neuroticisme. Una metanàlisi sobre la relació entre aquests cinc trets de personalitat i el desenvolupament del líder va

concloure que, a excepció de l'amabilitat, la resta de trets que conformen aquest model estan sòlidament associats amb el desenvolupament del lideratge (Judge *et al.*, 2002; Hoffman *et al.*, 2011).

Alguns estudis posteriors posen de manifest que hi ha altres trets de la personalitat que marquen diferències individuals que afecten el lideratge. Un model de la personalitat posterior al BFM anomenat *Neo-Socioanalytic Model* el qual està format per quatre elements de la personalitat: trets, motius, habilitats i històries (Roberts *et al.*, 2008); explica que cada un d'aquests elements té relacions úniques amb els resultats que s'estableixen al llarg de la vida. Aquest nou paradigma aporta una finestra nova de coneixement sobre la relació entre la personalitat i el lideratge que va més enllà dels cinc factors del *Big Five Model* i que emfatitza en la necessitat de conèixer els motius i els valors del líder (Hogan i Kaser, 2005). La relació entre personalitat i lideratge ha sigut tan estudiada que fins i tot es troben estudis que posen de manifest com alguns trets subclínic de la personalitat s'han identificat com a possibles causes desestabilitzadores en el desenvolupament del líder (Harms *et al.*, 2011).

Més enllà dels diferents models de personalitat que es relacionen amb el lideratge i que poden influir en el desenvolupament del líder, hi ha nombrosos autors que analitzen altres característiques i competències de l'ésser humà i la seva relació vers el desenvolupament del líder i/o lideratge. Més concretament, Gardner (1993) considera que la característica principal del desenvolupament del líder és construir la competència intra-personal per formar un model precís d'un mateix. Gardner (1998) fa una aproximació al retrat d'un líder exemplar i, per fer-ho, estudia casos concrets en profunditat. Segons l'autor hi ha certs aspectes relacionats amb el desenvolupament humà que poden estar relacionats amb la comprensió del lideratge: l'herència primat dels humans; l'avançada aparició del jo i dels altres; l'elaboració de la primera infància de profundes teories o "guions" entorn el món; els signes de perícia que es manifesten en camps valorats en la societat pròpia; i el conjunt específic de trets que poden caracteritzar al líder i al seguidor.

Tradicionalment, molts científics del comportament han volgut trobar resposta a la possible relació entre el lideratge i la intel·ligència intel·lectual (Avolio i Waldman, 1994). Al 1970, vint-i-cinc estudis demostraven una correlació entre les dues dimensions (Bass, 1990) conclouent que els líders,

tant homes com dones, són més intel·ligents que la resta de personal (Foti i Gershenoff, 1999; Kickul i Neuman, 2000; Smith i Foti, 1998) i per tant, que la intel·ligència intel·lectual pot actuar com a predictor del sorgiment del lideratge en grups petits (Rubin *et al.*, 2002).

Altres autors, consideren que la intel·ligència emocional (entesa com la capacitat de raonar sobre les emocions i utilitzar aquestes emocions per potenciar el pensament), inclou les habilitats per percebre emocions amb precisió, les habilitats per accedir i generar emocions que recolzin al pensament, les habilitats d'entendre les emocions i el coneixement emocional i les habilitats per regular reflexivament les emocions per promoure el creixement emocional i intel·lectual (Mayer *et al.*, 2004). És a dir, l'adequat coneixement i gestió de les emocions (tant d'un mateix com de la resta), és la capacitat més important per desenvolupar un lideratge efectiu (Goleman, 2012), fins i tot més que la intel·ligència intel·lectual (Sadri, 2012).

Finalment, hi ha un conjunt d'investigadors que estudien la relació entre les competències socials i el desenvolupament del lideratge (Boyatzis, 2011). S'entén per competència social la capacitat de manejar les interaccions socials de manera efectiva, és a dir la capacitat de formar i mantenir relacions properes i respondre de manera adaptativa en entorns socials. Donada la complexitat de les interaccions socials, la competència social és el producte d'una àmplia gamma de capacitats cognitives, processos emocionals, habilitats conductuals, consciència social i valors personals i culturals relacionats amb les relacions interpersonals. La competència social depèn de les característiques del desenvolupament, de la situació social específica i de les característiques culturals (Orpinas, 2010). Alguns autors com Riggio i Lee (2007) conclouen que els líders exitosos son tan efectius perquè durant la seva trajectòria vital han desenvolupat aquestes competències socials i no degut a l'eficiència dels programes específics de recursos humans per ensenyar aquestes competències.

Dins l'àmbit esportiu, el paper del líder i el lideratge ha sigut àmpliament estudiat en relació a diferents aspectes com els entrenadors i la influència que el seu estil de lideratge genera en els equips esportiu, el rendiment d'aquests o bé la relació que s'estableix entre ells (Jowett i Arthur, 2019;

Loughead i Hardy, 2005; Rieke *et al.*, 2008). També ha sigut àmpliament estudiat en relació al gènere per analitzar les diferències entre homes i dones pel que fa a les posicions de lideratge en les organitzacions esportives (Burton, 2019; Pape, 2020; Sotiriadou i Haan, 2019). Un altre tema força estudiat sobre el binomi lideratge i esport és el paper del líder en els esports d'equip (Cotterill i Fransen, 2016; Fransen *et al.*, 2020; Staw *et al.*, 2019).

En els últims anys ha anat emergent una nova línia d'investigació entorn el desenvolupament del lideratge des d'una visió més àmplia centrada en l'anàlisi dels factors que influeixen en el desenvolupament del líder al llarg de tota la vida. En aquesta línia, alguns estudis, suggereixen que la participació en algunes activitats organitzades com els esports durant la infantesa i l'adolescència pot influir al desenvolupament del líder (Murphy i Johnson, 2011; Liu *et al.*, 2021). Arrel d'aquests resultats, sorgeix la necessitat d'aprofundir en l'estudi del desenvolupament del líder a partir de la pràctica esportiva.

Segons dades d'INDESCAT (2021), a Catalunya existeixen 578 empreses vinculades al món de l'esport que representen 3.493,3 milions d'euros i 14.528 treballadors. Aquestes empreses s'agrupen en tres sectors: esdeveniments (consultoria esportiva i formació, organització d'esdeveniments, media, *event based services* i equips de competició), instal·lacions (fabricants d'instal·lacions, equipament per instal·lacions i gestió d'instal·lacions) i béns i serveis esportius (productes de nutrició i salut, eines i instruments, roba i complements, serveis de salut, benestar i rendiment i turisme esportiu actiu).

Considerant els resultats dels estudis previs i partint de la hipòtesi que la pràctica esportiva influeix en el desenvolupament del lideratge, analitzar la trajectòria esportiva d'una mostra de mànagers de Barcelona comparada amb una mostra de la població general catalana, permetrà explorar l'existència de patrons i analitzar la incidència de la pràctica esportiva realitzada al llarg de la vida d'una persona en el desenvolupament del lideratge.

D'altra banda, analitzar les característiques esportives de la mostra des de la perspectiva *Lifespan Developmental Psychology*, permetrà aportar nova informació que podrà ser utilitzada per

comparar amb qualsevol altre variable desitjada per analitzar la influència de la pràctica esportiva des de qualsevol àrea d'estudi. Així doncs, a partir de la revisió de la literatura i dels estudis realitzats aquesta tesi doctoral pretén aprofundir en l'estudi de la trajectòria esportiva i la influència que aquesta pot tenir en el desenvolupament del lideratge.

## Problemàtica

Una vegada feta l'anàlisi de la literatura existent i veient que es tracta d'un tema que per la seva naturalesa inclou diferents ciències, s'ha decidit tractar-lo des de l'aproximació *Lifespan Psychology Development*. La tesi que aquí es presenta, planteja un objectiu principal: analitzar l'existència de vincles entre la trajectòria esportiva i el desenvolupament del lideratge en una mostra de mànagers de Barcelona.

Per tant, aquesta recerca es planteja des de l'àmbit de les ciències de l'activitat física i l'esport dins l'entorn de la psicologia del desenvolupament humà, encara que també es tindran en compte conceptes de l'àmbit de la sociologia i la psicologia de les organitzacions.

### Figura 1

*Relació entre la pràctica esportiva i el lideratge*



Com s'ha mencionat anteriorment, està demostrat que l'activitat física contribueix al desenvolupament de l'individu i a l'adquisició de certs trets de la personalitat (Allen i Laborde, 2014).

Més concretament, hi ha certs aspectes com la regularitat de la pràctica esportiva (Barnett *et al.*, 2008; Howie *et al.*, 2019; Mäkelä *et al.*, 2017), la modalitat esportiva practicada, ja sigui competitiva, recreativa o per salut (Allen i Laborde, 2014) o bé el tipus d'esport ja sigui individual o col·lectiu (Agans i Geldhof, 2012; Madic *et al.*, 2015; Weinberg i Gould, 2014) que influeixen en l'individu que practica l'esport. L'anàlisi de la trajectòria esportiva es centrarà en l'estudi de les tres variables mencionades amb la finalitat de crear perfils esportius, explorar quina influència té la pràctica esportiva en el desenvolupament del lideratge i explorar la relació d'aquestes en el desenvolupament del lideratge. Tenint present la incidència de la pràctica esportiva en la presència de determinats trets de la personalitat sorgeix la necessitat de donar resposta a la pregunta d'aquesta recerca: com influeix la trajectòria esportiva en el desenvolupament del lideratge?

Partint de la idea que els mànagers són persones que pel seu càrrec han de liderar equips de treball, resulta imprescindible conèixer la trajectòria esportiva d'una mostra de mànagers amb la finalitat de poder explorar patrons. A partir d'aquí sorgeix la necessitat de dissenyar i validar un instrument que permeti la recollida de dades de la forma més adequada donada les característiques de la recerca amb l'objectiu de crear perfils que puguin ser relacionats amb qualsevol altre variable. Aquesta necessitat genera l'estudi I d'aquesta recerca corresponent al capítol IV d'aquesta tesi. Com ja s'ha vist, diferències com la modalitat (competitiva, recreativa o salut) o el tipus d'esport (individual o col·lectiu) generen diferències en la personalitat del practicant, per aquest motiu, conèixer quins són els resultats de la combinació d'aquestes variables ajudarà a donar resposta a la pregunta plantejada.

L'objectiu específic que es desprèn d'aquesta pregunta i que genera l'estudi II és la necessitat d'analitzar i comparar la trajectòria esportiva dels mànagers amb la trajectòria esportiva de la població general amb la finalitat d'explorar patrons i analitzar les similituds i les diferències entre ambdues mostres. Una vegada es coneix la trajectòria esportiva dels mànagers i de la població general, així com les similituds i diferències entre unes i altres, i tenint present la incidència de la pràctica esportiva en la presència de determinats trets de la personalitat sorgeix la necessitat de donar resposta al tercer



objectiu específic d'aquesta tesi a través de l'anàlisi de la percepció dels mànagers en relació a la transferència d'elements de la trajectòria esportiva en el desenvolupament del seu lideratge a través d'entrevistes en profunditat. Aquest objectiu genera l'estudi III que correspon al capítol VI d'aquesta tesi.

A mode de resum, aquesta recerca genera una pregunta que es deriva en un objectiu principal i dos objectius específics com es pot veure a continuació:

#### **Pregunta de la tesi**

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- La trajectòria esportiva d'una persona pot ser un element influent en el desenvolupament del lideratge?

#### **Objectiu general**

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- Analitzar l'existència de vincles entre la trajectòria esportiva i el desenvolupament del lideratge en una mostra de mànagers de Barcelona.

#### **Objectius específics**

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- Dissenyar i validar un instrument capaç de recopilar la trajectòria esportiva d'una persona de forma ràpida i autogestionada
- Identificar les similituds i diferències i els patrons entre la trajectòria esportiva d'una mostra de mànagers de Barcelona en relació a la trajectòria esportiva d'una mostra de la població catalana
- Estudiar la influència de la trajectòria esportiva de la mostra de mànagers en el desenvolupament del lideratge que exerceixen

## Estructura de la tesi

La tesi que es presenta a continuació és una recopilació de tres estudis estructurats en funció de les dues dimensions a estudiar: la trajectòria esportiva i la transferència d'aquesta al lideratge. Aquestes dues dimensions organitzen la tesi en set capítols amb la finalitat de facilitar i guiar la lectura del document.

Aquest primer capítol engloba els aspectes introductoris que s'estructuren en 4 punts, com són la justificació temàtica, la problemàtica a abordar, l'estructura de la tesi i finalment una nota pel que fa al gènere i a l'ús d'anglicismes durant el document. El segon capítol fa referència al marc teòric de la tesi en el que es fa una revisió de la literatura i es defineixen els constructes de la recerca. El tercer capítol detalla el disseny metodològic de la recerca a través de cinc punts: mètode, participants, instruments, procediment, anàlisi de dades i aspectes ètics.

Els següents tres capítols (4, 5 i 6) corresponen als estudis realitzats en relació a les dues dimensions d'estudi. S'han realitzat en llengua anglesa amb la finalitat d'optar a la menció internacional de doctorat. El capítol quatre, corresponent al primer estudi, sorgeix de la necessitat de dissenyar un instrument que permeti donar resposta al primer objectiu específic de la tesi. Aquest estudi, publicat a la revista *Aloma*, està estructurat en cinc apartats corresponents a la introducció, el mètode, els resultats, la discussió i la conclusió.

El cinquè capítol, relatiu a l'estudi II, neix per donar resposta al segon objectiu específic de la tesi mitjançant l'instrument dissenyat i validat resultant del primer estudi. Aquest estudi, publicat a *Ibero-American Journal of Exercise and Sports Science*, s'estructura en cinc apartats corresponents a la introducció, el mètode, els resultats, la discussió i les conclusions. El capítol sis, el qual al·ludeix al tercer estudi, sorgeix de la necessitat de donar resposta al tercer objectiu específic de la tesi. L'estudi qualitatiu basat en entrevistes s'estructura en sis apartats corresponents a la introducció, el marc teòric, el mètode, els resultats, la discussió i les conclusions.

Finalment, el setè i últim capítol d'aquest document, correspon a les conclusions de la recerca expressades a través de cinc punts: conclusions finals, model proposat, limitacions, línies

d'investigació futures i implicacions pràctiques. Aquest capítol s'ha redactat en anglès amb la finalitat d'optar a la menció internacional.

### Nota de gènere i anglicismes

Al llarg d'aquest treball s'ha emprat el terme *mànager* per referir-se a qualsevol posició de responsabilitat com el *coordinador/ la coordinadora*, el *director/ la directora* o el *gerent/ la gerent* per facilitar la comprensió i fer la lectura més amena, malgrat es refereix, sempre i indistintament, a persones d'ambdós sexes i totes les posicions de poder (excepte quan s'indica el contrari). Finalment, és important mencionar que durant les parts escrites en llengua catalana s'han emprat alguns anglicismes degut a la impossibilitat de traducció dels propis termes corresponents a noms de teories, mètodes, expressions o paraules clau.



## **CAPÍTOL 2: MARC TEÒRIC**

“Und wenn du lange in einen Abgrund blickst, blickt der Abgrund auch in dich hinein.”

(Friedrich Nietzsche)



## Perspectiva teòrica i revisió de la literatura

Amb la finalitat d'acotar i comprendre amb més profunditat les dimensions d'estudi, és necessari conèixer com s'ha tractat el concepte de la trajectòria esportiva i el lideratge des de diferents teories i àmbits d'estudi (Quivy i Van Campenhoudt, 2007). A continuació es fa una aproximació a les perspectives que s'ha considerat més rellevants en relació a la recerca.

### *Aproximació al concepte de Trajectòria Esportiva*

La paraula trajectòria té el seu origen etimològic en la paraula *transjacere* provinent del llatí *trans* (a través de) + *jacere* (llançar). Aquest significat ha anat evolucionant fins al concepte actual de trajectòria el qual té dues accepcions (Real Academia Española, 2018): una primera, fidel al seu origen llatí, la qual es defineix com una línia descrita en el plànol o en l'espai per un cos en moviment. La segona accepció, i la que dona sentit a aquesta tesi, s'entén com el curs o evolució que, al llarg del temps, segueix el comportament d'una persona, d'un grup social o d'una institució. És a dir s'entén el concepte com a trajectòria de vida.

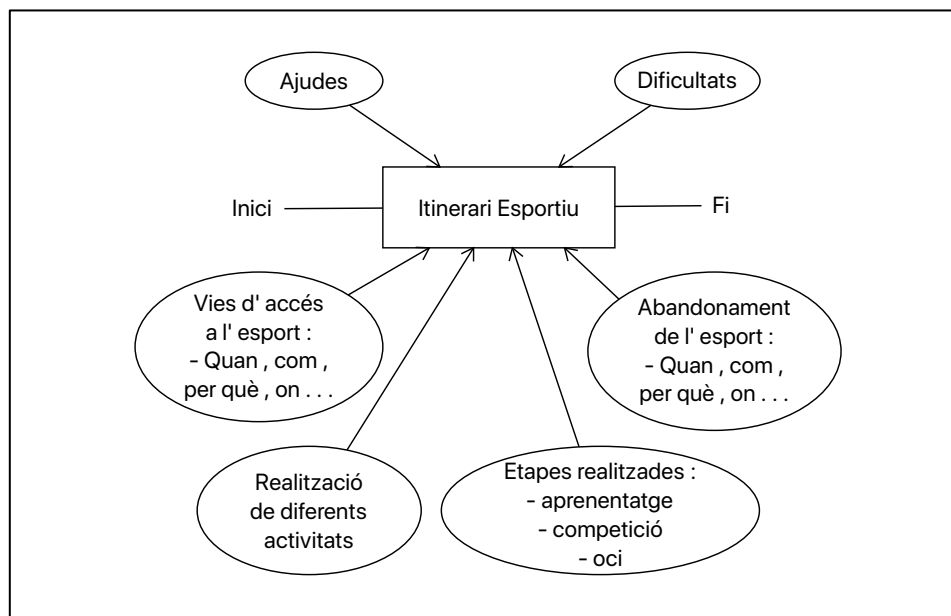
La trajectòria de vida d'una persona ha generat un gran interès dins el món acadèmic, motiu pel qual ha sigut àmpliament estudiada al llarg del temps des de diferents àmbits d'estudi i existeix una extensa bibliografia que en parla al respecte. En l'àmbit esportiu, tradicionalment ha sigut estudiada des de l'àmbit de la sociologia de l'esport, els antecedents es remunten al concepte d'itinerari esportiu, entès com una successió d'esdeveniments, des del punt de vista de l'experiència personal de l'atleta, que adquireixen significat d'acord amb el moment en el que tenen lloc (Puig i Morell, 1996).

Segons Puig (1993), l'itinerari esportiu és el procés que configura la història esportiva d'una persona. Consisteix en analitzar el seu comportament esportiu no centrat en un moment donat, sinó en una perspectiva diacrònica. Tal i com afirmen les autores, Masnou i Puig (1995) l'itinerari esportiu s'inicia en l'instant en que es pren contacte directe amb el món de l'esport o l'activitat física; es desenvolupa durant un període de temps més o menys ampli dedicat a la pràctica d'una o diverses

especialitats esportives i finalitza quan s'abandona la relació amb aquest àmbit com a participant. Durant aquest procés pot aparèixer l'abandonament parcial de pràctiques esportives concretes que són substituïdes per d'altres. En aquest cas, no es parla d'abandonament, sinó de canvi d'activitat. Segons Masnou i Puig (1995), l'estudi de l'itinerari esportiu d'un individu implica el coneixement i l'avaluació dels aspectes relacionats amb el procés de socialització d'un individu el qual s'exposa en forma d'esquema a la figura 2.

**Figura 2**

*L'itinerari esportiu i les circumstàncies que el conformen*



*Nota: De El acceso al deporte. Los itinerarios deportivos de M. Masnou i N. Puig, 1995, La iniciación deportiva y el deporte escolar, 371-394.*

Tal i com s'ha vist, el concepte d'itinerari esportiu entès com a context en el marc del qual s'inscriuen i cobren significat els esdeveniments, està directament relacionat amb les fases de ruptura que apareixen durant la trajectòria esportiva. Les entrades i sortides de la pràctica esportiva, és a dir l'abandonament o el canvi d'una pràctica esportiva per una altra. Aquest concepte convergeix amb la idea de les transicions de la teoria del cicle de vida aplicada a l'activitat física i l'esport.



El concepte d'itinerari esportiu té els seus orígens en la teoria o perspectiva del curs de vida (*Life Course Perspective*), es tracta d'una perspectiva desenvolupada a la dècada dels 60 per analitzar la vida de les persones dins un context estructural, social i cultural. Aquesta perspectiva es fonamenta en que el desenvolupament humà és un procés de vida en el que els esdeveniments, experiències, significats i rols d'una etapa estan influenciats per aquells que van ocórrer en etapes anteriors (Elder, 1998).

Aquesta teoria proporciona un marc per a l'estudi dels fenòmens en el nexce de les vies socials, la trajectòria de desenvolupament i el canvi social. L'anàlisi de la perspectiva del curs de vida s'organitza en 3 eixos: trajectòria, transició i punt d'inflexió, (Elder, 1991; Elder *et al.*, 2002; Elder *et al.*, 2006; Elder i Shanahan, 2006) i es sustenta en 5 principis bàsics: el principi de desenvolupament al llarg del temps, el principi del lliure albir (o agència), el principi de temps i lloc, el principi del *timing*, i el principi de vides interconnectades (Blanco, 2011; Elder *et al.*, 2006).

A mode de breu síntesi, entén com trajectòria una línia de vida o cursa, a un camí al llarg de tota la vida, que pot variar i canviar en direcció, grau i proporció (Elder, 1991). La transició fa referència als canvis de situació, ja sigui de forma probabilística corresponent al cohort d'edat o amb menys probabilitat d'ocórrer, ja que les transicions no són fixes i poden presentar-se en diferents moments sense estar predeterminades (Blanco, 2011). Finalment, el punt d'inflexió correspon a aquells moments en que els esdeveniments provoquen fortes modificacions que es poden traduir en modificacions del curs de la vida (Elder *et al.*, 2006).

El principi de desenvolupament al llarg del temps es resumeix com la necessitat de comprendre els processos de desenvolupament a llarg termini tenint en compte que per entendre un moment de la trajectòria és necessari analitzar el que el precedeix. El principi del lliure albir (o agència) es basa en la premissa que les persones construeixen el seu propi curs de vida a través de les eleccions i accions que prenen dins de les oportunitats i limitacions de la història i les circumstàncies socials. (Elder *et al.*, 2006; Shanahan i Elder, 2002).

El principi de temps i lloc defineix com el curs de vida d'un individu està integrat i influenciat pel moment històric i els llocs en els que experimenta al llarg de la seva vida. El principi del *timing* fa referència al moment concret en el qual té lloc un esdeveniment i per tant les conseqüències d'aquesta transició de la vida, els esdeveniments i els patrons de comportament variaran en relació amb el temps de vida d'aquella persona. Per últim, el principi de vides interconnectades exposa que les influències socio-històriques s'expressen en les xarxes de relacions compartides. Sovint una transició individual pot implicar transicions en la vida d'altres persones.

Prenent com a antecedents la perspectiva del curs de vida, el concepte d'itinerari esportiu està estretament associat a l'estudi dels esdeveniments que tenen lloc en la vida d'una persona i que influeixen la seva pròpia trajectòria esportiva.

### Aproximació Lifespan Developmental Psychology

Des de l'àmbit de la psicologia, aquest concepte s'ha descrit àmpliament a través de l'aproximació *Lifespan Developmental Psychology* o *Lifespan Psychology* (LP). Aquesta teoria es defineix com aquella que s'ocupa de l'estudi del desenvolupament individual, o ontogènesi, és a dir, de la descripció, explicació i modificació dels processos de desenvolupament durant el curs de la vida humana des de la concepció fins a la mort (Baltes *et al.*, 1980). La principal hipòtesi d'aquesta teoria és que el desenvolupament no s'atura quan s'aconsegueix l'edat adulta, sinó que cada període de la vida té els seus propis reptes i èxits de desenvolupament i que els processos adaptatius funcionen en tots els períodes de la vida. Es tracta de comparar el desenvolupament d'un individu amb el d'altres i amb l'estat propi de la persona en diversos moments (Baltes *et al.*, 2006).

L'aproximació LP es regeix per 4 assumpcions: el desenvolupament com a procés de llarga duració, el desenvolupament com a expressió dels principis ontogènics i evolutius, la concepció pluralista del desenvolupament, i finalment, el *Lifespan Developmental Psychology* com a marc integrador (Baltes *et al.*, 1980). El primer supòsit explica com els processos de canvi poden ocórrer en qualsevol moment de la vida. A més, no hi ha cap estat de maduresa que s'assumeixi com a un principi

general, i per tant, el desenvolupament es veu com un procés que dura tota la vida. La finalitat és identificar la forma i el curs d'aquests canvis de comportament a mesura que tenen lloc en diferents punts del cicle de vida i establir el patró d'ordre temporal així com les seves interrelacions.

El desenvolupament com a expressió dels principis ontogènics i evolutius implica que els factors associats amb els processos biològics i de socialització relacionats amb l'edat expliquen les regularitats i les diferències en el desenvolupament humà. Pel que fa al tercer supòsit, la concepció pluralista del desenvolupament, fa referència al procés de desenvolupament entès com un procés multilíneal i discontinu.

Segons els investigadors Baltes *et al.*, (1980) aquest procés de desenvolupament està influenciat per tres conjunts de variables tal i com es pot veure a la figura 3: les influències normatives segons l'edat (*Normative age-graded influences*), les influències normatives en funció de la història (*Normative history-graded influences*) i les influències no normatives (*Nonnormative influences*).

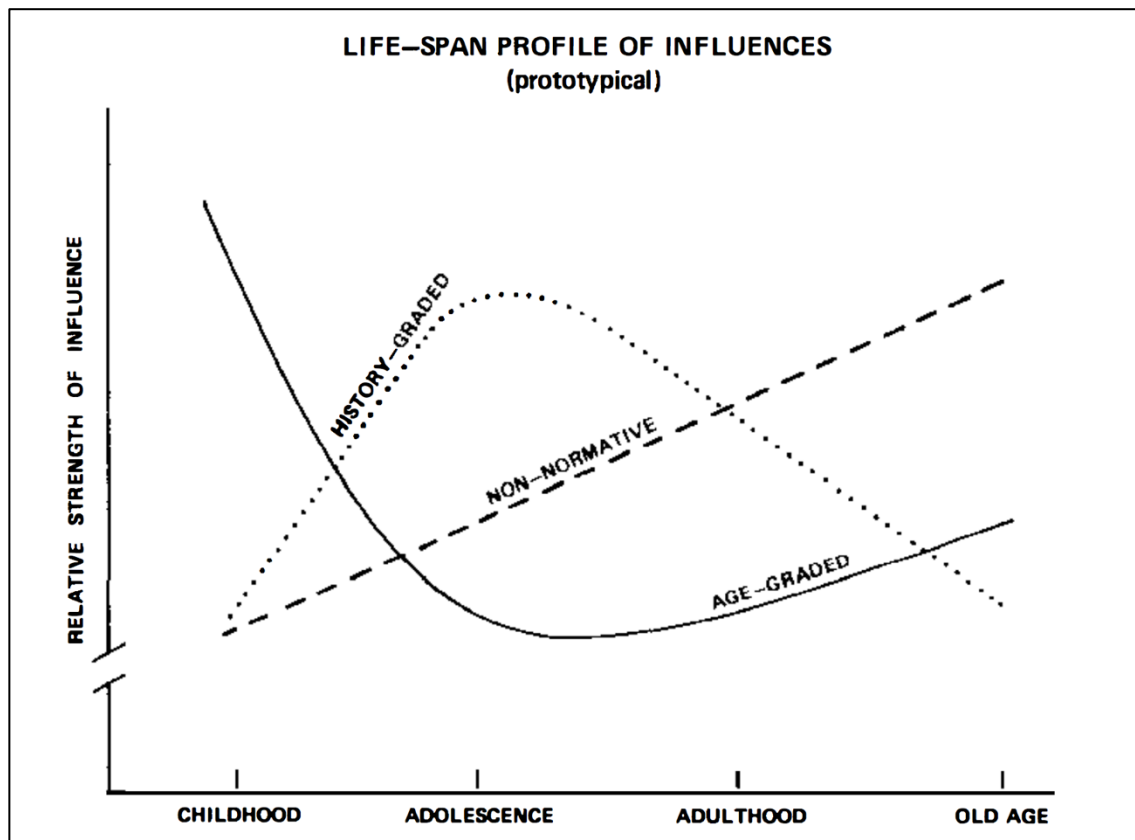
L'investigador Day (2011) explica que les influències normatives segons l'edat (*age-graded*) són factors biològics i ambientals que estan altament correlacionats amb l'edat en una àmplia varietat de subpoblacions i contextos. Com per exemple l'adquisició de certes competències a una determinada edat. Les influències normatives en funció de la història (*history-graded*), en canvi, són factors biològics i ambientals associats amb el canvi cultural. Com per exemple, un esdeveniment històric com una guerra o una crisi econòmica que afecta només als membres del cohort. Finalment, les influències no normatives (*non-normative*) són aquells impulsors biològics i ambientals del desenvolupament que no tenen lloc per tothom, o bé no es presenten de la mateixa manera o seqüència. Alguns exemples d'aquesta influència són tots els esdeveniments relacionats amb la vida familiar com tenir un fill, un divorci, etc. o bé les diferents situacions que es presenten en la vida laboral com pot ser l'atur o bé ocupar un càrrec de responsabilitat.

Baltes *et al.*, (1980) proposen que les influències normatives segons l'edat són les més influents pel desenvolupament a l'inici i al final del cicle de vida, mentre que les influències normatives en funció de la història tenen més repercussió en el control del desenvolupament durant

l'adolescència i la maduresa. Pel que fa a les influències no normatives es tornen més significatives a l'edat adulta i la vellesa. Aquestes dades adopten especial importància en recerques centrades en una de les etapes com a focus d'interès.

**Figura 3**

*Life-Span profile on influences*



*Nota:* Hypothetical profiles of the relative influence of normative age-graded, normative history-graded, and non-normative influences on life-span development. De Life-span developmental psychology de P.B. Baltes et al. (1980), *Annual review of psychology*, 31(1), 65-110. (<http://dx.doi.org/10.1146/annurev.ps.31.020180.000433>).

Finalment, l'últim supòsit es basa en que l'aproximació *Lifespan Developmental Psychology* proporciona una explicació integrada del desenvolupament humà ja que és combinable tant en un sentit descriptiu com teòric. A nivell descriptiu, consta de les bases de coneixement proporcionades

per les especialitats de desenvolupament específiques de l'edat com la infantesa, l'adolescència, l'edat adulta i l'envelliment. A nivell teòric, aquesta aproximació és vàlida ja que hi ha certs aspectes del desenvolupament humà que no tenen sentit si no s'expliquen a través d'aquesta aproximació (Baltes *et al.*, 1980).

La recerca a través d'aquesta aproximació pretén generar coneixement sobre cinc eixos del desenvolupament individual: La identificació del canvi intraindividual, la identificació de les diferències interindividuais en el canvi intraindividual, l'anàlisi de les interrelacions en el canvi de comportament, l'anàlisi dels factors determinants del canvi intraindividual i l'anàlisi dels factors determinants de les diferències interindividuais en el canvi intraindividual (Nesselroade i Baltes, 1979 ; Day, 2011).

### Aproximació LP en l'àmbit esportiu

La perspectiva LP ha sigut adoptada per un gran nombre d'investigadors amb la finalitat d'estudiar el paper de l'activitat física i l'esport en el desenvolupament humà en les diferents etapes de la vida. Tradicionalment, l'etapa més estudiada ha sigut la infantesa degut a l'assumpció de que els primers períodes de vida són precursors de posteriors períodes de desenvolupament (Malina, 1996). Tot i que actualment hi ha molta literatura enfocada a l'estudi de les etapes de l'adulthood i la vellesa, la infantesa segueix sent l'etapa que genera més estudis perquè és el moment de la vida on es produeix el moment més intens de desenvolupament cerebral. Aquest creixement es caracteritza per una maduració prolongada de les estructures implicades en la funció executiva i la memòria relacional, així com l'ajustament dels circuits cerebrals destinats a donar suport a les operacions del cervell adult (Luna, 2009).

A partir d'aquí, l'aproximació *Lifespan Developmental Psychology* ha sigut àmpliament referenciada en nombrosos estudis que analitzen la pràctica esportiva en diferents etapes de la vida des del punt de vista de la salut (Cheng i Mao, 2016; Janssen i LeBlanc, 2010; Kuh, 2007), ja sigui des del tractament o prevenció de lesions (Dufek *et al.*, 2008; Gunter *et al.*, 2012; Kiss *et al.*, 2018; Russell

*et al.*, 2018 ; Wiese-Bjornstal, 2009), la relació amb malalties mentals (Doré *et al.*, 2018; Hutchison *et al.*, 2018; Vella *et al.*, 2019) o bé amb el desenvolupament de processos cognitius (Engeroff *et al.*, 2019; Predovan *et al.*, 2019 i Netz, 2019).

Com a conseqüència dels diversos beneficis que comporta la pràctica d'activitat física i l'esport, ja sigui a nivell físic, psíquic o emocional (Warburton *et al.*, 2006), les ciències de l'activitat física i l'esport han donat molta importància a la constància de la pràctica esportiva al llarg del cicle de vida d'una persona (Breuer, 2009). Malauradament hi ha nombrosos estudis que demostren com la pràctica esportiva disminueix a mesura que augmenta l'edat de l'individu. (Haskell, et al., 2007; Sisson & Katzmarzyk, 2008; Sallis, 2000). En aquesta mateixa línia, els investigadors Breuer i Wicker (2009) realitzen un estudi per analitzar aquesta premsa a partir de l'aproximació LP i conclouen que tot i que la pràctica esportiva en els adults és menys freqüent que en els infants, aquesta pràctica és creixent respecte temps anteriors. És a dir que tot i que els adults practiquin menys esports regulats, en practiquen més que els adults de fa 20 anys.

Batista *et al.*, (2019) van realitzar una revisió sistemàtica per verificar l'associació entre la participació en esports a la infància i l'adolescència i la pràctica d'activitat física en l'edat adulta. Després d'analitzar 1340 articles, van concloure que hi ha una associació positiva, considerada de moderada a forta, entre les dues variables. Aspectes específics com la freqüència setmanal de la pràctica esportiva, les modalitats esportives i el nivell de pràctica s'associen amb el nivell d'activitat física en l'edat adulta. Les raons per les quals les persones realitzen activitat física en cada etapa del cicle de vida poden ser diferents tenint en compte les influències normatives graduades per edat, les influències normatives graduades per la història i la influència no normativa (Baltès *et al.*, 1980; Miller i Iris, 2002), però la capacitat de fomentar el capital social (Perks, 2007) i la motivació mostren una forta associació en aquest compromís (Gavin *et al.*, 2014). Aquesta correlació és més forta quan la pràctica de l'activitat física és congruent amb els valors personals, objectius, necessitats i/o perquè la troben inherentment agradable, i menys perquè volen obtenir recompenses o evitar càstigs (Brunet i Sabiston, 2011). Desroches et al., 2019 identifiquen tres patrons de participació (no pràctica esportiva,

pràctica esportiva baixa i intensa) esportiva durant l'adolescència entre una població general d'estudiants per analitzar els predictors individuals, socials i ambientals de pertinença al patró identificat. Els resultats posen de manifest la importància d'involucrar els pares en la participació esportiva per a que aquesta sigui intensa i contingui la pràctica de diferents esports. En aquesta mateixa línia, és important destacar l'estudi realitzat per Howie *et al.*, (2016) en el que identifiquen perfils de trajectòries esportives organitzades des de la primera infància fins al final de l'adolescència analitzant cohorts d'embarassos a través de l'aproximació LP. Un estudi posterior (Howie *et al.*, 2018) analitza els factors que s'associen a les trajectòries de participació esportiva organitzada en les mateixes etapes anteriors i conclou que el principal factor és l'adhesió a través de l'afiliació a l'organització esportiva.

Tal i com s'ha pogut veure a través de les investigacions exposades, l'estudi de les trajectòries esportives des de la perspectiva Lifespan Developmental Psychology ha anat guanyant importància durant els últims anys amb la finalitat d'estudiar diferents variables des de la infantesa fins l'etapa adulta o vellesa.

### *Aproximació al concepte de Lideratge*

El concepte líder és un anglicisme que prové de la paraula *leader* i al·ludeix a la persona que duu a terme l'acció de *lead*, el significat literal de la qual és "guiar" o "orientar", encara que les connotacions que la paraula ha adoptat al llarg dels anys van molt més enllà i, per tant, a nosaltres ens ha arribat directament en l'accepció exclusiva de *leader*.

Alguns autors defineixen el concepte de líder de forma operativa de la mateixa manera que es podria definir el concepte de mànager. Segons Castro (2007), ser líder implica tenir la capacitat per resoldre problemes complexos i tenir les competències necessàries per resoldre situacions poc estructurades amb un alt nivell d'efectivitat. Montañez (2015) afegeix, que el líder, a més, ha d'estar dotat de capacitats i habilitats per dirigir un equip i aconseguir les metes d'una organització.

Altres autors com Zaleznik (1992), en canvi, aporten una visió més conductual i argumenten

que els líders són aquells que desenvolupen nous enfocaments per resoldre problemes i que estan oberts a noves opcions. Álvarez de Mon (2006) afegeix que els líders tenen un compromís inherent amb l'ètica i els valors. El punt de vista des de la perspectiva psicològica de Gardner (1998) aporta que es tracta d'aquelles persones, que influeixen en les conductes, pensaments i sentiments de les persones mitjançant la paraula i l'exemple personal.

En la mateixa línia, Northouse (2016) planteja que els mànagers són més reactius i menys emocionalment involucrats, i els líders són més proactius i més emocionalment implicats. És a dir, líder i mànagers tenen els mateixos objectius, però simplement tenen diferents maneres d'aconseguir-los.

Tal i com afirma Torralba (2016) la definició de lideratge és d'una immensa complexitat, no només per la gran quantitat de literatura que estudia el tema sinó per la disparitat d'àmbits de coneixement que l'han abordat. Els autors Robbins (2004) i Montañez (2015) afirmen que el lideratge és la capacitat d'influir en un grup de persones per a la consecució d'unes metes. En el mateix sentit, Goleman (2014) opina que el lideratge és l'art de convèncer a la gent de que col·labori per aconseguir un objectiu comú.

Northouse (2016) fa la distinció entre management i lideratge i diu que el management s'encarrega de crear ordre i estabilitat mentre que el lideratge en basa en l'adaptació i la construcció del canvi. Els autors Workman i Cleveland-Innes, (2012) conclouen que el lideratge com a competència és utilitzat tant per mànagers com per líders, mentre que l'èxit del lideratge serà determinat per les persones que són dirigides i les seves necessitats individuals i col·lectives, que deferiran segons l'audiència, circumstància o situació.

Arribats a aquest punt, sorgeix l'etern debat: el líder neix o es fa? És a dir, el líder neix amb totes les característiques del lideratge? O bé, aprèn a ser un líder al llarg de la seva vida? Hi ha diverses teories que es posicionen amb un caràcter genetista com és el *Big Five* proposat per Goldberg (1980) o els factors de personalitat de Cattell (1977), i n'hi ha d'altres que defensen un caràcter après com l'observació vicària de Bandura (1978), el condicionament operant de Skinner (1970) o les teories cognitives de Piaget (1981).



No hi ha una resposta clara sobre aquest aspecte, però en general s'accepta un caràcter mixt de qualsevol tret psicològic, és a dir, que s'atribueixen causes genètiques innates i altres de socials apreses, i per tant, de la mateixa manera passa amb el lideratge (Baleriola, 2016). El gran interès que desperta el lideratge i la seva aplicabilitat des de diferents àmbits ha repercutit en una necessitat ingent d'analitzar i mesurar el lideratge. Al llarg dels anys, nombrosos autors han proposat diferents mètodes i teories que donen resposta a aquest gran interès. Northhouse (2016) agrupa totes aquestes teories sota 5 grans perspectives: de trets, d'habilitats, de conducta, psicodinàmica i situacional.

La perspectiva de trets va sorgir a principis del segle XX i es plantejava com aquell enfocament que es basa en trets o característiques de naixement que són estables i que el fet de tenir-les provoca el desenvolupament d'un líder. Aquesta visió ha anat evolucionant als llarg del temps fins a enfocar-se en com els trets d'un individu influencien en el lideratge, es tracta d'una perspectiva centrada en el líder i no en els seguidors o la situació. Després de nombrosos estudis buscant analitzar quins són els trets característics del lideratge, Northhouse (2016) resumeix i conclou els següents: la intel·ligència, l'auto-confiança, la determinació, la integritat i la sociabilitat.

La perspectiva d'habilitats, centrada en el líder, es basa en les destreses que poden ser apreses i desenvolupades, és a dir, les capacitats. Es tracta d'una perspectiva purament descriptiva que dona una estructura per entendre la naturalesa del lideratge efectiu (Northhouse, 2016). La perspectiva de conducta es basa en el comportament observable del líder; mentre que la perspectiva psicodinàmica està construïda al voltant de la idea que els processos psicològics, socials i emocionals entre líders i seguidors tenen una gran influència en el lideratge efectiu.

Finalment, l'enfocament situacional es centra en estudiar les diferents situacions en les que es troba el líder. Es tracta d'una perspectiva molt estudiada i revisada al llarg del temps per nombrosos autors que ha donat peu als estils de lideratge, ja que la premissa d'aquesta teoria és que les diferents situacions a les que es troba el líder comporta l'adopció de diferents estils de lideratge (Northhouse, 2016).

### Teoria de desenvolupament del lideratge basat en l'experiència

La teoria de desenvolupament de lideratge basat en l'experiència suggereix que les experiències, més que la genètica, o qualsevol programa, tenen un paper important en el desenvolupament del lideratge (McCall, 2004). Aquest enfocament representa una nova manera integral de desenvolupar líders perquè uneix experiència de vida, experiència en el lloc de treball i desenvolupament d'habilitats específiques, estimulant la reflexió sobre l'experiència i l'obertura cap a l'aprenentatge continu a través del *feed-back* constant (Thomas, 2008). McCall (2010) destaca set conclusions sorgides després de revisar la literatura de les últimes dècades sobre la contribució de l'experiència en el desenvolupament del lideratge.

La primera conclusió postula que el lideratge s'aprèn de l'experiència (McCall, 2010). Però tot i que aquesta afirmació sembla evident, McCall (2004) puntualitza que aquest aprenentatge no passa de manera automàtica, ja que qualsevol persona podria no obtenir cap aprenentatge de l'experiència, o bé una aprenentatge equivocat o bé un aprenentatge parcial. Aquest complex procés requereix de consciència de l'aprenentatge, predisposició a aprendre i alguns altres aspectes ambigus com saber quan s'ha produït l'aprenentatge (Day, 2010). La identitat del lideratge, per exemple, és un requisit essencial perquè es produeixi el desenvolupament del lideratge (Day et al., 2009).

La segona conclusió de McCall (2010) es basa en el fet que algunes experiències influeixen més que altres. Aquestes experiències reportades pels directius d'èxit durant les últimes dècades es classifiquen en: les primeres experiències laborals, els encàrrecs o tasques a curt termini, les tasques importants destacades, els referents positius i negatius, les dificultats de diversa índole i alguns esdeveniments puntuals com per exemple, un programa de formació. Tot i així és important tenir present el context en el que té lloc l'experiència més enllà del reforç. Murphy i Johnson (2011) remarquen la importància d'analitzar el desenvolupament a partir de les experiències que tenen lloc abans de l'edat adulta per tal de millorar la comprensió del lideratge i el desenvolupament del líder sobre les influències i factors d'impacte en el desenvolupament del líder.

El següent supòsit suggereix que el que provoca que l'experiència es converteixi en una vivència d'aprenentatge potencialment influent és el repte que comporta la pròpia experiència, ja sigui perquè sorgeix de forma inesperada, o és molt complexa o és una novetat, o bé implica molta pressió, etc. (McCall, 2010). En aquest sentit, Liu et al., (2021) afegeixen que els reptes de desenvolupament en l'espai de treball són un desencadenant per desenvolupar habilitats de lideratge, ja que requereixen de creativitat i capacitat de resolució de problemes. Aquestes habilitats de lideratge es poden classificar en habilitats estratègiques, cognitives i de lideratge conductual (Day et al., 2009; DeRue i Wellman, 2009).

La conclusió número quatre postula que diferents tipus d'experiències ensenyen lliçons diferents en funció de cada persona, ja que davant una mateixa experiència, no tothom aprendrà el mateix (McCall, 2010). A més, el context en el que té lloc l'experiència, és un element que pot influir en l'aprenentatge ja que sovint es pot modificar o controlar segons convingui per assolir els objectius personals i/o organitzatius (Klimoski, 2013). En aquest sentit, alguns autors (Murphy i Johnson, 2011; Liu et al., 2021) proposen alguns models de desenvolupament del lideratge per mostrar com diferents experiències poden influir en l'individu en cada etapa de la vida on el context adopta un paper destacat.

La cinquena conclusió (McCall, 2010) proposa que l'aprenentatge a partir de les experiències viscudes dins de cada lloc de treball o bé a través de la realització de les tasques assignades és més efectiu si s'incorpora el *feed-back* continu i el *coaching*. DeRue et al., (2012) afegeixen que aquest efecte s'accentua quan les persones són conscients, obertes a l'experiència i emocionalment estables i tenen una base rica d'experiències de desenvolupament prèvies. La problemàtica que se'n deriva és que aquesta retroalimentació requereix d'un esforç per part de les organitzacions que a vegades és difícil d'aconseguir (Day, 2010).

El següent supòsit de McCall (2010) es basa en la idea que tothom pot obtenir les experiències que necessita malgrat les circumstàncies personals i professionals. Tot i que moltes de les experiències rellevants tenen lloc durant la infància i l'adolescència o són conseqüència d'experiències fora del lloc

laboral com per exemple les relacions personals, encara hi ha un marge d'oportunitat per obtenir l'experiència que es necessita per tenir èxit. La clau és fer coincidir les necessitats de desenvolupament amb les oportunitats de desenvolupament a través de les experiències correctes. És una qüestió d'intencionalitat, tot i que hi ha factors personals que influeixen en la capacitat o la voluntat d'un individu d'aprendre de l'experiència (Day, 2010).

Finalment, la darrera conclusió suggereix que l'aprenentatge a partir de l'experiència és un procés complex i dinàmic que té lloc al llarg del temps el qual requereix de predisposició a aprendre de les experiències que es viuen. No es tracta d'anar acumulant coneixements de forma lineal, sinó d'anar aprenent dels accidents, dificultats, canvis i experiències diverses que van apareixent al llarg de la vida (McCall, 2010). A partir d'aquí, pren especial importància el concepte d'agilitat d'aprenentatge, definit com la capacitat d'aprendre de noves maneres, adaptant-se a noves circumstàncies i oportunitats, el qual està relacionat amb el rendiment i el potencial del líder (De Meuse, 2017). Així doncs, tots els individus tenen oportunitats de treballar en el desenvolupament del seu lideratge en cada etapa de desenvolupament i tothom té el potencial de desenvolupar habilitats de líder, entenent el lideratge de desenvolupament com un procés que té lloc durant tota la vida i que implica múltiples experiències, situacions i contextos (Liu et al., 2021).

### Aproximació LP i lideratge

En aquest sentit, l'aproximació *Lifespan Developmental Psychology* ha sigut aplicada a nombrosos camps d'estudi dins la psicologia com per exemple; la memòria (Kensinger, 2008; Payer, 2006), la intel·ligència psicomètrica (Baltes *et al.*, 1999), el funcionament intel·lectual (Baltes *et al.*, 2006), o bé la personalitat (Bleidorn *et al.*, 2018; Donnellan i Robins, 2009; Van Lieshout, 2000; Wilson i Gullone 1999). Dins l'àmbit de la psicologia, el desenvolupament del lideratge des de l'aproximació LP és una àrea d'interès creixent dins la comunitat científica tal i com es demostra en la revisió efectuada per dur a terme aquesta recerca.

Abans però, és important matissar la diferència entre el desenvolupament del lideratge entès com el desenvolupament d'estructures i processos socials i el desenvolupament del líder el qual es centra en l'individu (Day, 2000). Al llarg del temps, ambdós conceptes han sigut àmpliament estudiats, sobretot en l'etapa de l'edat adulta. L'investigador Day (2011a i 2011b) fa una revisió de la literatura existent sobre el desenvolupament del lideratge en la que analitza el concepte des d'una perspectiva teòrica i proposa com haurien de plantejar-se les recerques entorn aquest tema. Els autors Day i Sin (2011) afirmen que l'estudi de les trajectòries de desenvolupament sembla ser un enfocament prometedori per modelar i entendre els processos de desenvolupament subjacents en els líders. És important tenir present que els mànagers constitueixen el principal grup objectiu en l'estudi del desenvolupament del lideratge ja que es pressuposa que pel càrrec que han de desenvolupar, han de ser capaços d'actuar com a líders per ser efectius. (Anderson i Tengblad, 2016). En aquesta tesi, es fa servir el terme líder per centrar-nos en el rol i el terme mànager per centrar-nos en la persona que desenvolupa el càrrec.

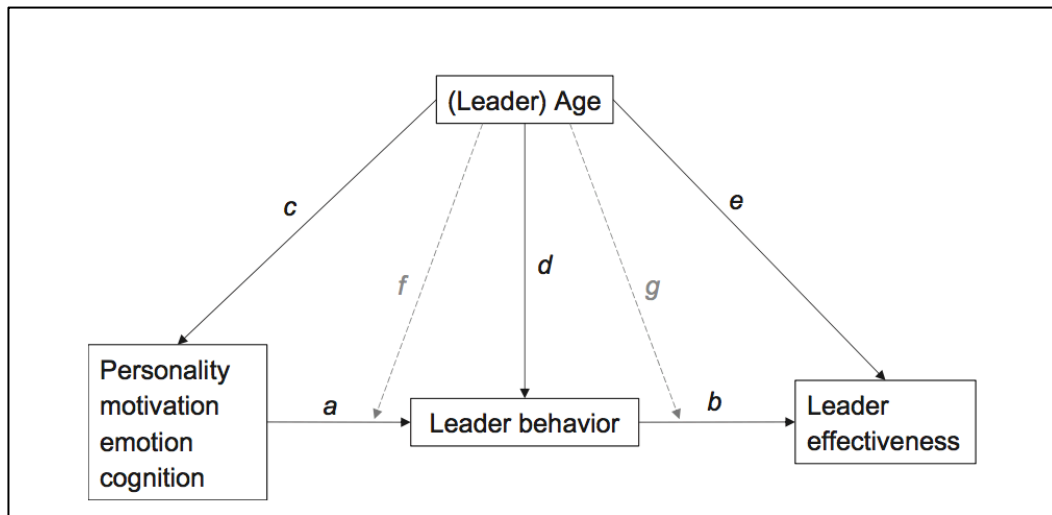
En els últims anys, hi ha un interès creixent per conèixer i analitzar els factors que influeixen en el lideratge des de la perspectiva LP. En aquest sentit, Day i Sin (2011) demostren que certes competències com els beneficis d'adoptar una identitat del líder, orientar-se cap a la consecució d'objectius a llarg termini en formes que millorin l'aprenentatge i seleccionar objectius específics com a part del desenvolupament continu d'un adult poden arribar a ser factors importants per millorar i facilitar el desenvolupament de líders efectius.

Des d'un altre punt de vista, Rosing i Jungmann (2019) estudien com l'aproximació *Lifespan Developmental Psychology* en el desenvolupament cognitiu, desenvolupament socio-emocional, la personalitat i el desenvolupament de la motivació pot influir en el lideratge. A través de la figura 4, aquestes investigadores expliquen com la personalitat, la motivació, les emocions i la capacitat cognitiva canvia al llarg del temps (c) i com a conseqüència també ho fa el comportament del líder i l'efectivitat del líder (d i e). Les investigadores Murphy i Johnson (2011) són les primeres a analitzar el desenvolupament del líder des de la infància i proposar un model que mostra els processos dinàmics

interactius associats al desenvolupament del lideratge (Figura 5). El model comença amb factors de desenvolupament primerenc que determinen el desenvolupament dels líders al llarg del temps.

**Figura 4**

*Integració de l'aproximació Lifespan Psychology amb la teoria del lideratge*



*Nota:* De Life Span Perspectives on Leadership de K. Rosing i F. Jungmann, 2019, *Work across the lifespan*, pp. 515-532(<https://doi.org/10.1016/B978-0-12-812756-8.00022-0>)

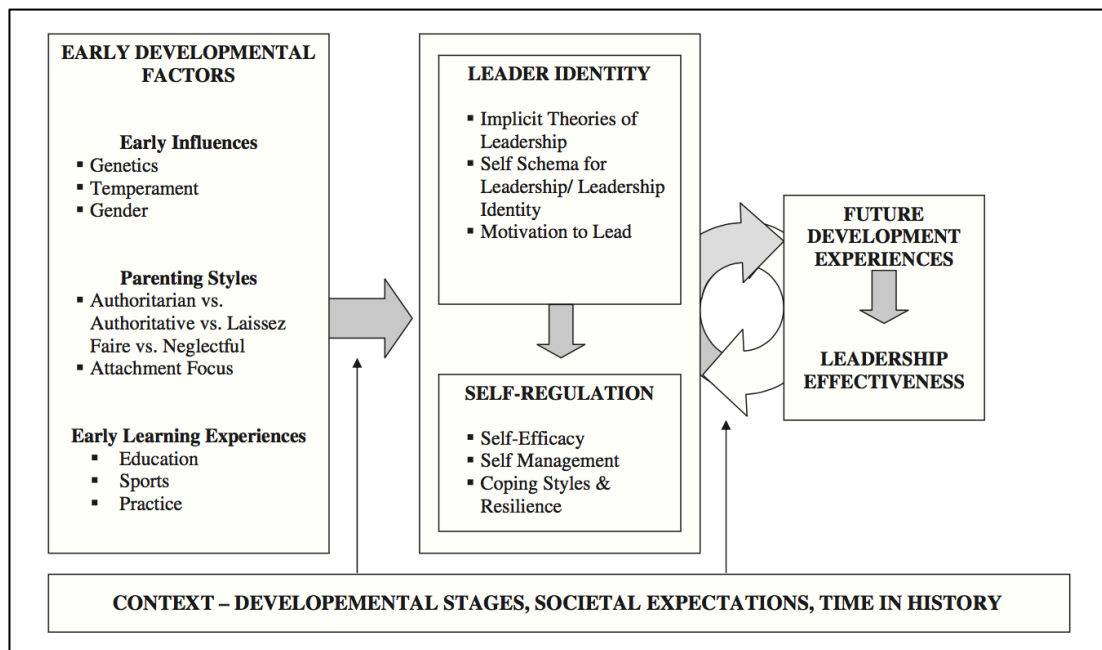
Rehm (2014) realitza un estudi exploratori en el que analitza el model proposat per Murphy i Johnson (2011) dins un context educatiu per dissenyar un nou model destinat al desenvolupament del lideratge dels adolescents en les escoles que pugui ser promogut pels propis docents. El model proposat fa especial èmfasi en el creixement i desenvolupament personal combinat amb l'oportunitat d'implementar a la pràctica els coneixements obtinguts a través de l'aprenentatge.

Tal i com anticipa l'estudi anterior, la major part de la literatura enfocada a estudiar el desenvolupament del lideratge des del punt de vista dels factors influents, es centra en analitzar adolescents i universitaris (Murphy i Johnson, 2011). Un exemple és l'estudi realitzat per Liu *et al.*, (2019) en que analitzen una mostra de 1.255 estudiants de secundària per concloure que la sobreprotecció dels pares en els adolescents afecta negativament al desenvolupament del líder. O bé,

l'estudi d'Offermann *et al.*, (2020) el qual posa de manifest, a través de l'entrevista a 101 líders universitàries, que els anys universitaris són un període influent pel desenvolupament del lideratge.

**Figura 5**

*L'aproximació Lifespan Psychology aplicada al desenvolupament del líder*



*Nota:* De The benefits of a long-lens approach to leader development: Understanding the seeds of leadership, de S.E. Murphy i S.K. Johnson, 2011, *The Leadership Quarterly*, 22(3), 459-470 (<https://doi.org/10.1016/j.leaqua.2011.04.004>).

D'altra banda, dins de l'estudi del comportament de lideratge, l'estudi del lideratge transformacional orientat al canvi, és un dels temes de més interès. Zacher *et al.*, (2015) presenten un model de desenvolupament del lideratge al llarg de la vida basat en els canvis que es produeixen en el lideratge i en com aquests afecten a l'efectivitat a mesura que van passant els anys. Analitzen canvis relacionats amb l'edat del líders i dels seguidors, així com canvis relacionats amb els trets i característiques del líder, amb el seu comportament i els processos d'atribució i identificació dels seguidors. Els autors conclouen que amb el pas del temps, els líders es tornen menys carismàtics,

menys orientats al canvi i menys predisposats a assumir riscos, es tornen més passius. Aquests canvis en les habilitats i competències de lideratge durant el transcurs de la vida afecten a la identitat del líder (Miscenko, 2017). Els autors Rosing i Jungmann (2015) afegixen que és important que en aquest tipus d'anàlisi es matisi la diferència del que entén per lideratge un líder jove o un líder gran i per tant, les futures recerques haurien de centrar-se en analitzar quins estils o comportaments de lideratge són percebuts com a adequats pels seguidors. Finalment, l'estudi de Rudolph *et al.* (2018) conclou que la perspectiva LP sobre les diferències generacionals, capta millor les dinàmiques relacionades amb l'edat que són rellevants per al lideratge, el seguiment i el desenvolupament del lideratge.

### Desenvolupament del lideratge i esport

La recerca entorn el binomi lideratge-esport té els seus inicis a la dècada dels '70 (Peachey *et al.*, 2015). Des d'aleshores, la recerca entorn aquest concepte s'ha desenvolupat seguint nombroses línies d'investigació, des de l'estudi dels estils i comportaments de lideratge dels referents esportius (entrenadors, capitans, etc.) i la seva relació amb els resultats individuals, grupals i organitzatius (Chelladurai, 1990; Hood, 2015; Wright i Coté, 2003) a l'estudi del context de la pràctica dins del camp i la gestió convencional fora del camp de la pròpia organització esportiva (Frawley *et al.*, 2018; Harris, 2001; Peachey *et al.*, 2015; Pfister i Radtke, 2009). Però, no és fins les últimes dècades, que el concepte s'estén al sector empresarial (Wolfe *et al.*, 2005) i augmenta considerablement l'interès entorn la transferència de competències i habilitats adquirides a través de l'esport al món empresarial (Burnes i O'Donnell, 2011; Frawley *et al.*, 2018; Jalonen *et al.*, 2018; Ryan i Dickson, 2016; Seppänen, 2020; Thornton i Etxebarria, 2021; Trapp, 2013; Vilhelmsdottir *et al.*, 2016 i Wallenberg, 2021) i per tant, l'estudi del desenvolupament del lideratge a través de l'esport (Murphy i Johnson, 2011; Liu *et al.*, 2021; Reitan i Stenberg, 2018).

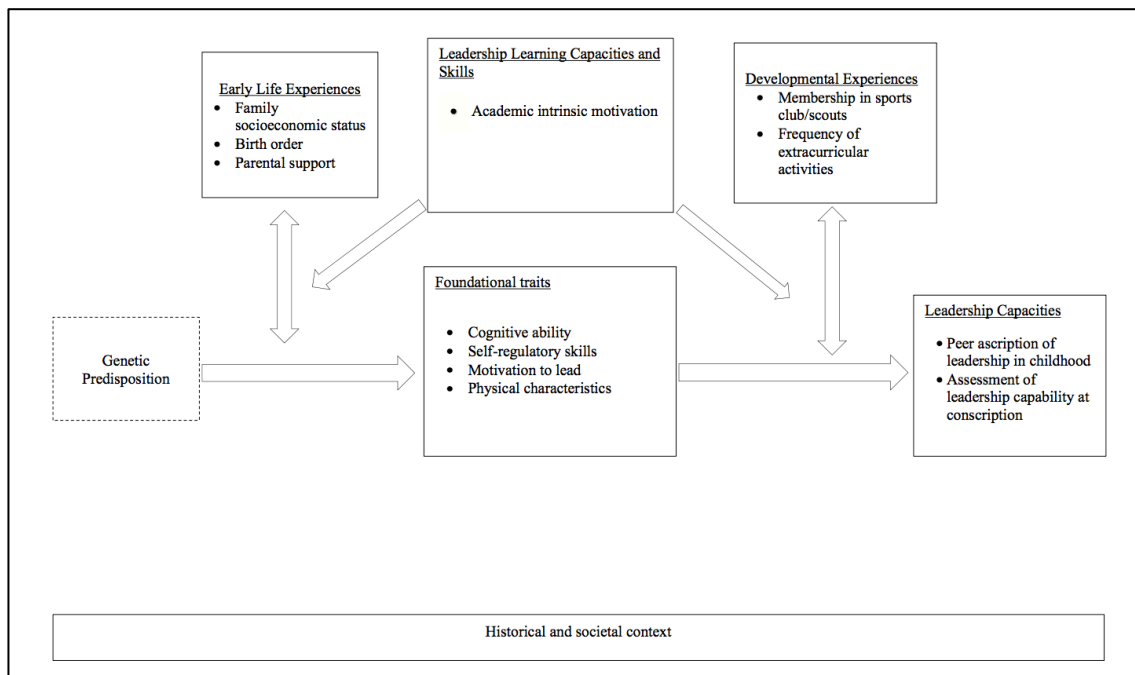
Des de l'aproximació Lifespan Developmental Psychology, Murphy i Johnson (2011) proposen un model de desenvolupament del líder (Figura 5) iteratiu i dinàmic el qual parteix dels factors i experiències que influencien el desenvolupament del lideratge durant la infància. Dins de les



experiències d'aprenentatge primerenc (McCall, 2010), s'hi contempla la pràctica en esports organitzats com un element incident a l'hora de desenvolupar competències del lideratge com és la iniciativa, el control emocional o bé el treball en equip (Larson, 2000 i Larson et al., 2006).

**Figura 6**

*Model per al desenvolupament del lideratge en la infància i en l'edat adulta*



*Nota:* From classroom to conscription de Leadership emergence in childhood and early adulthood de T. Reitan i S.A. Stenberg, 2019, *The Leadership Quarterly*, 30(3), 298-319 (<https://doi.org/10.1016/j.leaqua.2018.11.006>).

Seguint el model exposat anteriorment, Reitan i Stenberg (2018) proposen un model pel desenvolupament del lideratge en la infància i en l'edat adulta (figura 6) adaptat de Zaccaro *et al.*, (2018) en el que l'esport s'exposa com un element que genera oportunitats d'adquirir, generar i practicar les competències de lideratge ja sigui per transferència i imitació dels models de lideratge que van observant o bé pel simple fet de participar en l'activitat esportiva (Karagianni i Montgomery, 2018). Més recentment, Liu *et al.*, (2021), proposen un nou model (Figura 7) basat en el model de

Murphy i Johnson (2011) en el que estructuraven el desenvolupament del lideratge a partir de les diferents etapes de la vida: pre-infantesa, infantesa, adolescència, joventut, adulta i vella.

Aquest model (Liu *et al.*, 2021) contempla l'activitat física i la pràctica esportiva en les quatre primeres etapes de forma directa o indirecta. En la primera etapa corresponent a la pre-infantesa, es parla del joc com un element influent a través de fomentar l'adquisició de comportaments pro-socials com la cooperació, habilitats interpersonals com la comunicació i la consciència de dinàmiques col·lectives. En aquest sentit, el joc actiu és una forma d'activitat física molt adequada en les etapes formatives per introduir els diferents esports i promoure l'adquisició de les habilitats i competències mencionades (Côté *et al.*, 2003; García-López *et al.*, 2009; Houlihan i Green, 2011).

**Figura 7**

*Desenvolupament de líders a través de finestres vivencials al llarg de la vida.*

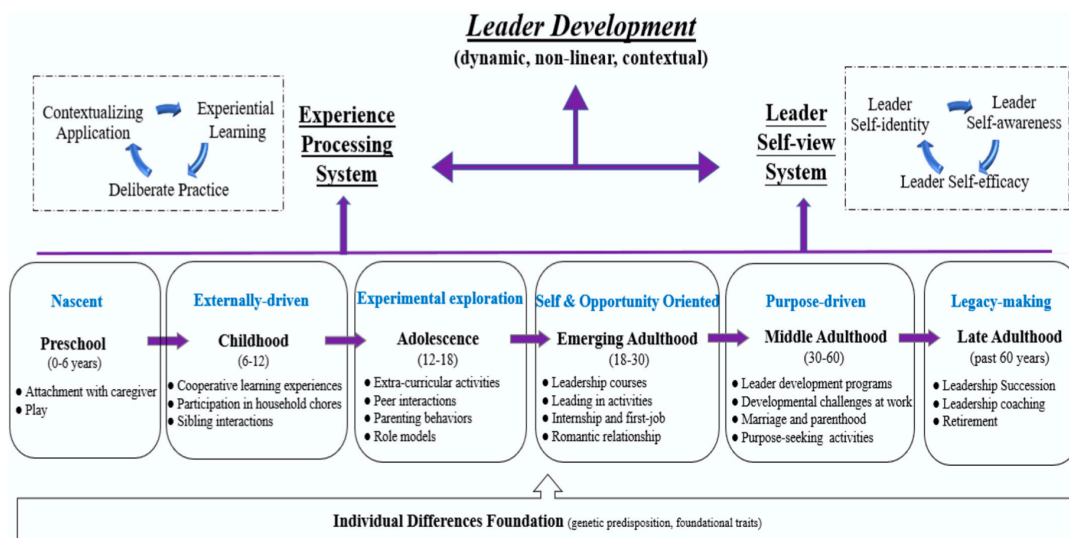


Fig. 1. Leader development through experiential windows across the lifespan.

*Nota:* De leader development across the lifespan: A dynamic experiences-grounded approach de Z. Liu *et al.*, 2021, *The Leadership Quarterly*, 32(5), 101382 (<https://doi.org/10.1016/j.leaqua.2020.101382>).

En la infantesa s'inclou l'aprenentatge basat en les experiències cooperatives com un element més d'influència al lideratge dins d'aquesta etapa, amb el foment del treball en equip i la col·laboració, les relacions intergrupals, la cohesió social, l'acceptació entre iguals i la comunicació. En aquest cas, la cooperació pot donar-se de moltes formes, entre d'altres a través de certes activitats dinàmiques, jocs cooperatius, esports d'equip o fins i tot esports específicament cooperatius com és el Korfball (Gülay, 2010; Parlebas, 2020). Aquests arguments es confirmen amb l'estudi de Opstoel et al., 2020 el qual confirma que la pràctica d'esports i l'educació física escolar contribueixen al desenvolupament personal i social, més concretament a l'ètica de treball, el control i gestió de les emocions, la fixació d'objectius, la presa de decisions, la capacitat de resolució de conflictes, la responsabilitat, el lideratge, la cooperació, la capacitat de conèixer gent i fer amics, la comunicació i el comportament pro-social.

La tercera etapa, corresponent a l'adolescència, menciona les activitats extra-escolars, entre les quals s'inclou l'esport, com activitats que tenen un paper important en l'aprenentatge social dels adolescents. A més, també ofereixen escenaris en els quals els adolescents poden utilitzar les habilitats relacionades amb el lideratge en situacions del món real i així desenvolupar el seu potencial de lideratge (Murphy i Johnson, 2011). D'altra banda, aquesta etapa també incorpora com elements influents, les relacions amb els companys, el comportament parental i els referents (com per exemple, els entrenadors). En aquest sentit, l'esport ofereix l'escenari ideal on fàcilment es poden identificar aquests tres factors influents en l'adquisició d'habilitats d'organització i coordinació, sentiment de pertinença al grup, desenvolupament psico-emocional i socio-emocional, establiment de la pròpia identitat, desenvolupament moral o desig de ser un model a seguir entre d'altres. Els autors Gould i Carson (2008) afirmen que a través de la participació esportiva, els adolescents guanyen confiança, aprenen noves capacitats físiques, desenvolupen importants relacions socials, desenvolupen habilitats de lideratge i obtenen satisfacció treballant per assolir els objectius. D'altra banda, s'ha demostrat com els adolescents que perceben comportaments de lideratge transformacional en els seus pares, replicaran ells mateixos aquests comportaments (Zacharatos *et al.*, 2000). Finalment, la quarta etapa corresponent a la joventut inclou el factor del lideratge en les activitats, ja sigui liderant un equip, un

club esportiu o bé participant activament en les activitats coordinatives d'un club esportiu. Aquestes experiències proporcionen oportunitats d'exhibir les habilitats de lideratge adquirides o bé un aprenentatge indirecte a partir d'observar i participar (Murphy i Johson, 2011; Sternberg, 2011). A més d'aquestes experiències, la simple pràctica esportiva durant la universitat ha demostrat proporcionar nivells més alts d'auto-eficiència en el lideratge (Anderson, 2012) i treball en equip si la pràctica esportiva ha estat en un esport col·lectiu (Extejt i Smith, 2009).

Les investigacions realitzades dins d'aquest àmbit posen de manifest, que no només es desenvolupen les habilitats i competències que es mostren en el model de Liu *et al.*, (2021) sinó que hi ha moltes altres habilitats relacionades amb l'esport que es poden transferir a situacions de lideratge més endavant a la vida, com ara: visualitzar, racionalitzar, desenvolupar l'autoeficàcia, centrar-se en els objectius, interessar-se, ser competitiu, estar orientat a les tasques i gaudir de l'experiència (Chelladurai, 2007). En definitiva, hi ha evidències que demostren que l'esport contribueix al canvi de personalitat (Allen i Laborde, 2014).

Arrel dels resultats obtinguts que demostren l'estreta relació entre la pràctica esportiva i el desenvolupament del lideratge en joves i adolescents, augmenta l'interès per l'estudi de la transferència de l'esport al lideratge demostrat en el sector empresarial. Els autors, Burnes i O'Donnell (2011) realitzen un estudi en el que analitzen de quina manera els processos per assolir l'èxit esportiu es poden transferir a l'àmbit empresarial i demostren com l'habilitat per gestionar el canvi, la comunicació, les relacions interpersonals i el desenvolupament de l'equip són àrees en les que els líders esportius presenten millor puntuacions que els líders empresarials. Alguns dels motius que justifiquen perquè els esportistes presenten algunes qualitats del lideratge de forma més significativa que altres persones es deu a que els esportistes que competeixen a cert nivell sempre busquen nous límits, gaudeixen amb la pressió. A més, tenen una gran capacitat de compartimentalitzar que comporta que no es distreguin amb les victòries dels contrincants (Jones, 2008). Aquestes característiques demostren que els principis de l'esport d'elit (estrès, lideratge, equips d'alt rendiment i l'entrenament personalitzat) són fàcilment transferibles al sector empresarial (Jones, 2002).

Finalment, Trapp (2013) afegeix que aquestes influències transferibles de l'esport al lideratge empresarial varien en funció de la participació en esports individuals o col·lectius així com el rol que adopten. En aquest sentit, és important destacar que els mànagers constitueixen el principal grup objectiu en l'estudi del desenvolupament del lideratge en el sector empresarial (Allen i Laborde, 2014) ja que es pressuposa que pel càrrec que han de desenvolupar, han de ser capaços d'actuar com a líders per ser efectius (Anderson i Tengblad, 2016).

## Delimitació de l'objecte teòric

A partir de la teoria i la pregunta i objectius generats durant la recerca es poden delimitar 2 grans dimensions: la trajectòria esportiva i la transferència d'aquesta al desenvolupament del lideratge. Aquestes dimensions es poden descriure a través d'unes variables que es podran mesurar mitjançant uns indicadors. Aquests indicadors, són fets empíricament comprovables que remetent a l'existència d'un fet no observable directament (Heinemann, 2008).

Tal i com afirma Moragas (2014) "aquesta conceptualització és una construcció abstracta que pretén donar compte de la realitat estudiada. No necessàriament s'ha de fixar en tots els aspectes d'aquesta realitat. Precisament, permet fer una tria d'aquells que són considerats essencials des del punt de vista de la investigació". En aquesta recerca es parteix de la idea que la investigació gira entorn la trajectòria esportiva i la influència que aquesta podria generar en el desenvolupament del lideratge. A partir d'aquesta premissa sorgeixen dues dimensions: trajectòria esportiva i la transferència d'aquesta en el desenvolupament del lideratge.

Tal i com es pot veure en la taula 2, la primera dimensió referent a la trajectòria esportiva, busca conèixer el perfil esportiu de cada mànager. Aquesta dimensió es conceptualitza en quatre variables (història esportiva, pràctica esportiva, context esportiu i rols dins l'esport) que adquireixen operacionalització en base a diferents indicadors. Seguidament, la segona dimensió referent a la transferència de l'activitat física (AF) i l'esport al desenvolupament del lideratge es conceptualitza en quatre variables (història laboral, referents, experiències significatives i esport en l'entorn laboral) que es concreten en catorze indicadors.

**Taula 2**

*Objecte teòric de la investigació: dimensions, variables i indicadors*

<b>DIMENSIONS</b>	<b>VARIABLES</b>	<b>INDICADORS</b>	
Trajectòria esportiva	Pràctica esportiva	Modalitat esportiva Tipus de pràctica Constància	
	Història esportiva	Pre-infantesa Infantesa Adolescència Joventut Adultesa Vellea	
	Context Esportiu	Iniciació esportiva Vivències significatives Punts d'inflexió en la pràctica esportiva Sentiments i emocions vers l'esport	
	Rols dins l'esport	Participació activa com a practicant Monitoratge i tècnics Posicions de coordinació i/o direcció	
Transferència de la pràctica esportiva al desenvolupament del lideratge	Història laboral	Context laboral (Sector, anys al càrrec, funcions, etc.) Conciliació laboral Competències del càrrec	
	Referents	Referents positius Referents negatius Competències percebudes	
	Experiències significatives	Punts d'inflexió positius Punts d'inflexió negatius	
	L'esport en l'entorn laboral		Element de cohesió Element socialitzador Element de captació de talent

A continuació es detalla l'explicació corresponent a cada un dels conceptes que delimiten l'objecte d'estudi d'aquesta recerca:

### *Dimensió 1: Trajectòria esportiva*

Arrel de la revisió de la literatura, aquesta dimensió s'ha estructurat en quatre variables (història esportiva, pràctica esportiva, context esportiu i rols dins l'esport) i quinze indicadors en funció de l'element a analitzar.

#### **Variable 1.1: Pràctica esportiva**

Aquesta variable explora la manera com s'ha realitzat la pràctica a través de tres indicadors considerats rellevants a l'hora de desenvolupar habilitats i competències pel lideratge: modalitat esportiva, ja sigui competitiva, recreativa o de salut; el tipus de pràctica, ja sigui individual o col·lectiva i la constància de la pràctica esportiva durant cada etapa i entre les etapes (Allen *et al.*, 2011; Dionigi *et al.*, 2011; Extejt i Smith, 2009; Franck, 2009; Gené & Latinjak, 2014; Jonker *et al.*, 2010; Korovljev *et al.*, 2016; Madic *et al.*, 2015; Mäkelä *et al.* 2017; Van Vianen i De Dreu, 2001; Weinber i Gould, 2014; Wright, & Côté, 2003).

#### **Variable 1.2: Història esportiva**

La història esportiva és la variable que conceptualitza la pràctica esportiva realitzada a cada etapa de la vida. Els indicadors referents a cada una de les etapes (pre-infantesa, infantesa, adolescència, joventut, adultesa i vellesa) han sigut seleccionats a partir de models teòrics previs (Day *et al.*, 2009; Liu *et al.*, 2021; Murphy & Johnson, 2011).

#### **Variable 1.3: Context esportiu**

Aquesta variable inclou tots els elements relacionats amb la pràctica esportiva que no són intrínsecs d'aquesta. El context esportiu s'analitza a través de quatre indicadors definits segons la



revisió de la literatura: la iniciació esportiva, les vivències significatives, els punts d'inflexió en la pràctica esportiva i els sentiments i emocions ver l'esport (Howie *et al.*, 2016; Liu *et al.*, 2021; Masnou i Puig, 1995; Murphhy i Johnson, 2011; Puig i Morell, 1996; Trapp, 2013). La iniciació esportiva, entesa com el moment en que l'individu comença a practicar esport per primera vegada, inclou la persona, persones o institucions que van fomentar la pràctica esportiva en l'individu, el moment de la vida en que es va començar, les organitzacions involucrades, etc. Les vivències significatives, inclouen tots aquells moments esportius o no esportius viscuts durant la trajectòria esportiva que són rellevants per l'individu. Els punts d'inflexió fa referència a l'abandonament de la pràctica esportiva i als motius pels quals això passa. Finalment, els sentiments i emocions vers l'esport, recull totes aquelles opinions, sentiments i emocions relacionades amb la pràctica esportiva de forma directa o indirecta.

#### **Variable 1.4: Rols dins l'esport**

Els rols dins l'esport fa referència a totes aquells posicions que s'han exercit vinculades a l'esport, ja sigui dins de l'equip esportiu o bé com a posició laboral ja sigui remunerada o no (Burnes & O'Donnell, 2011; Murphy i Johnson, 2011; Shaikh et al., 2019).

#### ***Dimensió 2: Transferència de la pràctica esportiva al desenvolupament del lideratge***

Després de la revisió de la literatura, aquesta dimensió també s'ha estructurat en quatre variables (història laboral, referents, experiències significatives i l'esport en l'entorn laboral) i onze indicadors en funció de l'element a analitzar.

#### **Variable 2.1. Història laboral.**

Aquesta variable recopila tota la trajectòria laboral entorn posicions de coordinació i direcció. S'estructura a partir de tres indicadors: context laboral, conciliació laboral i competències del càrrec. El context laboral inclou totes les dades demogràfiques en relació a la posició laboral (anys als diferents càrrecs, persones a l'equip, tipus d'empresa, etc.). La conciliació laboral fa referència a la

manera com es gestiona el temps entre la feina, la família, l'esport i la vida personal. I, les competències del càrrec inclou totes aquelles habilitats o competències que els individus consideren necessàries per exercir els diferents càrrec que ocupen (Burnes & O'Donnell, 2011; Frawley *et al.*, 2018; Moragas, 2014).

#### Variable 2.2: Referents

La variable referents inclou totes aquelles persones vinculades a l'esport que d'alguna manera han influenciat a l'individu en diferents moments de la seva pràctica esportiva. Aquesta variable es conceptualitza a través de tres indicadors, els referents positius, els referents negatius i les competències mostrades per aquests referents que són percebudes per les persones que els mencionen com a referents (Burnes & O'Donnell, 2011; Hood, 2015; Murphy i Johnson, 2011).

#### Variable 2.3: Experiències significatives

Les experiències significatives fan referència a totes aquelles experiències viscudes en l'àmbit laboral que d'alguna manera han generat algun impacte, ja sigui positiu o negatiu en la persona al llarg de la seva vida. La variable es conceptualitza a través de dos indicadors, punts d'inflexió positius i punts d'inflexió negatius, segons la manera com s'ha percebut per la persona que els ha viscut i els recorda (Liu *et al.*, 2021; Murphy i Johnson, 2011).

#### Variable 2.4: L'esport en l'entorn laboral

Aquesta variable explora el paper de l'esport dins de l'entorn laboral a través de tres indicadors: l'esport com a element socialitzador, com a element de cohesió i com a element de captació de talent (Burnes & O'Donnell, 2011; Frawley *et al.*, 2018).



### **CAPÍTOL 3: DISSENY METODOLÒGIC**

“There is one great difficulty with a good hypothesis. When it is completed and rounded, the corners smooth and the content cohesive and coherent, it is likely to become a thing in itself, a work of art. It is then like a finished sonnet or a painting completed. One hates to disturb it. Even if subsequent information should shoot a hole in it, one hates to tear it down because it was once beautiful and whole” (Steinbeck, 1951, p. 180).



En aquest capítol, es descriu de forma resumida la metodologia que s'ha emprat per al desenvolupament d'aquesta tesi, tenint en compte que cada estudi recull de forma exhaustiva l'explicació detallada en relació al mètode, participants, instruments, procediment, anàlisi de dades i aspectes ètics.

En el primer punt es presenta el mètode de la investigació el qual es basa en una investigació per mètodes múltiples. A continuació es defineix la mostra seleccionada i els instruments de la recerca: el qüestionari i l'entrevista en profunditat. Seguidament, es descriu el procediment emprat per a dur a terme el treball de camp i com s'han tractat les dades. Finalment, es descriuen els aspectes ètics contemplats durant la recerca.

## El mètode

El mètode seleccionat ve condicionat pel marc teòric plantejat i ens permetrà recollir les dades que donaran resposta a les preguntes formulades a l'inici de la recerca. Els trets distintius d'aquesta recerca i la problemàtica plantejada, han portat a establir un disseny metodològic de mètodes múltiples estructurat en tres estudis consecutius. Es tracta d'una tesi amb un enfocament mixt, és a dir que s'analitza i vincula dades quantitatives i qualitatives en una mateixa recerca per respondre al problema plantejat (Mertens, 2005). Segons el sistema de categories proposat per Hernández i Torres (2018) es tracta d'un disseny mixt amb un enfocament dominant qualitatiu ja que l'estudi es desenvolupa sota la perspectiva de l'enfocament qualitatiu però manté un component quantitatiu.

El disseny plantejat per mètodes múltiples ha permès abordar la pregunta inicial plantejada a l'inici de la recerca a través de tres estudis escrits en llengua anglesa:

- Study I: Sport and physical activity throughout the lifespan: the "Sport Trajectory Questionnaire"
- Study II: Sport trajectory over a life span perspective. A comparative study between managers and general population in Barcelona.

- Study III: Leader development across the lifespan through sport and physical activity

El primer estudi, corresponent al disseny i validació del qüestionari *Sports Trajectory Questionnaire* (STQ), és una investigació qualitativa que té com objectiu dissenyar un instrument capaç de recopilar la trajectòria esportiva d'una persona al llarg de la seva vida de forma ràpida i precisa en qualsevol moment amb la finalitat de poder ser administrat a grans mostres i crear perfils esportius.

L'estudi II és una investigació amb un disseny mixt amb enfocament qualitatiu etnogràfic. Tal i com afirma Creswell (2005), aquest té per objectiu estudiar els patrons referits a la cultura d'un col·lectiu, en aquest cas la trajectòria esportiva de la població catalana i els mànagers de les empreses. L'enfocament mixt ve donat de l'explotació de les dades a través d'un anàlisi qualitatiu i quantitatiu.

Finalment, el tercer estudi correspon a una investigació qualitativa etnogràfica amb un component narratiu. Per un costat, té com a objectiu aprofundir en l'estudi dels patrons esportius dels mànagers a través d'entrevistes en profunditat i per un altre, té com a objectiu avaluar una successió d'esdeveniments concrets en la vida d'aquests mànagers per analitzar si existeix una relació entre la trajectòria esportiva dels mànagers i el lideratge que exerceixen a través de les entrevistes en profunditat.

En tota la recerca s'utilitza el mètode deductiu (*top down approach*) en el que partim d'una teoria per formular una hipòtesis que després es confirmarà o refutarà a través de les dades recopilades (Trochim, 2005).

## Participants

Aquesta recerca parteix de la teoria formulada pels autors Hernández et al., (2006) en que s'entén que dins del procés qualitatiu, la mostra és un grup de persones, esdeveniments, successos, comunitats, etc. sobre el qual s'han de recol·lectar les dades, sense que necessàriament sigui representativa de l'univers o població que s'estudia. En aquesta recerca, s'ha seleccionat la mostra

en funció de l'objectiu de cada un dels estudis amb la finalitat de donar resposta a les preguntes formulades a l'inici de la recerca.

El primer estudi consta de dues parts diferenciades: la validació de l'instrument i la prova pilot. En la primera part van participar tretze experts en Ciències de l'Activitat Física i l'Esport de tres universitats catalanes seleccionats pel seu grau de coneixement en el tema d'interès. La prova pilot va comptar amb un mostreig no probabilístic per conveniència conformat per un total de 129 estudiants (18 dones i 111 homes) d'entre 15 i 25 anys d'edat (M i DT) de tres cicles formatius esportius de grau mig i superior de Catalunya (ICCIC, CE. Jaume Balmes i IES Alt Berguedà). De la totalitat de mostra d'estudiants, el 45.7% corresponen a alumnes matriculats al cicle de grau mig de Conducció d'Activitats Físiques en el Medi Natural (CAFEMN), el 34,9% correspon a alumnes matriculats al primer any del cicle de grau superior d'Animació d'Activitats Físiques i Esportives (AAFE) i el 19,4% als alumnes matriculats al segon any del cicle de grau superior d'AAFE. En aquest estudi el criteri de selecció dels centres ve donat per la facilitat d'accés a la mostra i el criteri d'inclusió de la mostra és la matriculació activa als cicles formatius.

El segon estudi, corresponent a la comparació entre la trajectòria esportiva dels mànagers i la població general, inclou dues mostres que agrupen un total de 360 persones (150 dones i 210 homes) d'entre 18 i 65 anys (Me 37,68 & s 8,98) de Barcelona. La primera mostra etiquetada com a població general correspon a un mostreig no probabilístic de resposta voluntària format per 274 participants (127 dones i 147 homes) el qual va ser reclutat a través d'un anunci a les xarxes socials més utilitzades a nivell empresarial (LinkedIn i Twitter). En aquest cas, el criteri d'inclusió de la mostra és qualsevol persona major de 18 anys. La segona mostra correspon a un mostreig no probabilístic de bola de neu compostat per 86 mànagers (23 dones i 63 homes) d'entre 18 i 65 anys d'edat (Me 43,79 & s 9,14) d'empreses privades de Barcelona. En aquest últim cas el criteri d'inclusió és: a) ser mànager d'una empresa privada i b) tenir cinc o més empleats.

Finalment, l'últim estudi compta amb una mostra intencionada de 17 casos típics de mànagers (5 dones i 12 homes) seleccionada a partir dels resultats dels estudis anteriors. En aquest



cas, el criteri d'inclusió de la mostra ve determinat en funció del tipus de perfil esportiu que presenten, 59% corresponent al perfil esportiu mixt combinat constant i 41% corresponent al perfil esportiu col·lectiu competitiu constant.

## Instruments

En aquesta recerca s'ha utilitzat el qüestionari auto-administrat en línia degut a la facilitat i llibertat que ofereix i l'entrevista en profunditat per la gran quantitat de dades de molt contingut que proporciona (Heinemann, 2008).

Per a l'estudi I i II s'ha utilitzat el qüestionari validat *Sports Trajectory Questionnaire* (STQ). Es tracta d'un qüestionari auto-administrat en format on-line que té per objectiu recopilar la trajectòria esportiva d'una persona al llarg de la seva vida. El STQ està estructurat per etapes evolutives en funció dels quatre estadis de desenvolupament cognitiu proposats per Piaget (1981) i complementats per l'enfocament sociogenètic del desenvolupament de Vygotsky (1979; 1986). El qüestionari es pot trobar clicant al següent enllaç <http://stq.sportupp.com> o bé, en format paper a l'annex.

Per a l'estudi III s'han realitzat entrevistes semi-estructurades seguint el guió de l'entrevista (veure Annex 4) dissenyat a partir de l'enfocament d'entrevista directa (Kvale, 2008). D'acord amb les característiques essencials de les entrevistes qualitatives proposades per Rogers i Bouey (2005), el principi i el final de l'entrevista no s'ha predeterminat amb claredat, s'ha sigut flexible adaptant cada pregunta a les circumstàncies de la persona entrevistada.

Les preguntes i l'ordre amb què s'han efectuat, s'han adequat als participants, s'ha anat prenent nota de les anècdotes, l'entrevistadora ha compartit amb l'entrevistat el ritme i la direcció de l'entrevista, l'entrevistador ha ajustat la seva comunicació a les normes i al llenguatge de l'entrevistat, i finalment, les entrevistes han tingut un caràcter força amistós.

## Procediment

Després d'una revisió exhaustiva de la literatura i diverses consultes amb experts es va dissenyar un primer esborrany del qüestionari Sports Trajectory Questionnaire (STQ) que es va anar modificant fins a obtenir la versió final en funció de la valoració de tres experts en sociologia de l'esport de tres universitats catalanes (l'Escola Universitària de Salut i Esport, l'Institut Nacional d'Educació Física de Catalunya i la Universitat Ramon Llull). Aquesta versió va ser validada per 10 experts en Ciències de l'Activitat Física i l'Esport d'aquestes universitats a través d'un formulari creat ad hoc. Durant tot el procés es va garantir la confidencialitat i la privacitat de la informació aportada per cada expert. Pel que fa a la prova pilot corresponent a l'estudi I, es va contactar les escoles per demanar autorització per a la realització dels qüestionaris en l'espai i horari docent. Una vegada es va tenir el consentiment de les escoles, es va procedir a l'administració dels qüestionaris a tots els estudiants que van accedir a participar a l'estudi després de ser informats a través del document informatiu (veure Annex 2) i haver signat el consentiment informat (veure Annex 1). L'administració dels qüestionaris es va fer en grups de 15 estudiants en una aula informàtica amb 15 ordinadors sota la supervisió de la investigadora principal. Aquest estudi va permetre validar el qüestionari i realitzar la prova pilot per definir diferents perfils esportius. Va demostrar que el qüestionari STQ serveix per l'objectiu pel que estava dissenyat: la recopilació de la trajectòria esportiva d'una persona al llarg de la seva vida.

A partir d'aquí, s'inicia l'estudi II en el que s'administra el qüestionari a la població general a través de les xarxes socials per a que puguin participar de manera voluntària. Es realitza un breu text explicatiu de la recerca en forma de publicació amb la finalitat d'informar a les persones interessades en participar-hi i al mateix temps captar la màxima participació possible. Seguint aquesta línia, s'afegeix el consentiment informat al qüestionari STQ, de manera que abans d'accedir al qüestionari s'ha d'acceptar participar a la recerca clicant el botó corresponent. Paral·lelament, es contacta a diferents mànagers de Barcelona via e-mail o telèfon i se'ls informa sobre la recerca a través del document informatiu (Veure Annex 2) i es procedeix a administrar els qüestionaris a través d'un enllaç

a tots aquells que ens envien el consentiment informat signat (veure Annex 1). Aquest estudi permet obtenir dades sobre la trajectòria esportiva de la població general i dels mànagers per analitzar els patrons a nivell de diferències i similituds que hi pugui haver (o no) entre la població general i els mànagers.

Finalment, l'estudi III neix a partir dels resultats de l'estudi II en el que s'aprecien diferències significatives entre les dues mostres (població general i mànagers). Després d'analitzar les diferències i veure els perfils esportius de cada mànager, es selecciona una mostra intencionada (veure estudi III) de 17 persones a les quals es contacta per participar en una entrevista semi-estructurada de 40 minuts aproximats de durada. Totes les persones entrevistades van ser informades sobre el procediment abans de l'entrevista a través del consentiment informat (veure Annex 1) amb la finalitat de garantir la confidencialitat i privacitat de les dades i obtenir el permís de gravació. Totes les entrevistes van ser enregistrades, la major part a través de vídeo, i es van transcriure literalment. Pel que fa a la seva execució, cal mencionar que es van dur a terme en un moment i espai seleccionat per les persones entrevistades per afavorir l'ambient idoni que garanteixi la comoditat dels entrevistats. El to de les entrevistes ha procurat ser informal i amistós amb la finalitat de poder facilitar la connexió entre ambdues persones i d'aquesta manera fomentar un clima de confiança que ofereixi el màxim de llibertat d'expressió als entrevistats.

## Anàlisi de dades

El qüestionari *Sports Trajectory Questionnaire*, recull totes les dades de forma automàtica que queden emmagatzemades en una base de dades de manera que garanteix la confidencialitat. Les dades que s'obtenen a través del STQ, corresponents a l'estudi I i II, són dades qualitatives, que s'exporten automàticament a un full de càlcul Microsoft Excel per poder-la treballar des del programa que es consideri més oportú. En aquest cas, al tractar-se de dades qualitatives, es treballen amb les eines avançades del propi Microsoft Excel que permet quantificar les dades i analitzar les variables de

forma individual processant les possibles correlacions amb d'altres variables per cada un dels segments d'aquestes. El procediment d'anàlisi es pot consultar als capítols 4 i 5 d'aquesta recerca.

Pel que fa a l'estudi III, les dades que es desprenen de les transcripcions es codifiquen i categoritzen a través del programa Open Code versió 4.03 i s'analitzen a partir de l'anàlisi temàtic. El procediment es pot consultar de forma més detallada al capítol 6.

### Aspectes ètics

L'ètica professional, entesa com el referent teòric davant la pràctica professional que dota de consciència la nostra actuació personal en l'exercici professional (Heinemann, 2006) és la base fonamental de qualsevol recerca sobre la que es sustenta l'actuació vers i entre totes les persones implicades.

Seguint aquestes premisses, els tres estudis s'han realitzat d'acord amb els principis ètics corresponents al codi de Nuremberg el qual manifesta que el consentiment voluntari del subjecte humà és absolutament essencial. Els membres de la mostra han estat informats, a través d'una adaptació del model de full d'informació de la Universitat Ramon Llull, de la naturalesa de la investigació abans de participar-hi. El consentiment informat s'ha redactat a través del model de consentiment informat de la Universitat Ramon Llull i segueix les normes contingudes a la Declaració d'Hèlsinki, així com la informació estipulada en el Títol I, article 12 del Reial Decret 561/1993 del 16 d'abril. Els membres de la mostra dels tres estudis han signat el consentiment informat acceptant la seva participació abans de respondre el qüestionari o l'entrevista semi-estructurada. Finalment, la investigadora ha garantit en tot moment la confidencialitat i la privacitat de la documentació aportada durant tot el procés per a un ús exclusiu d'aquesta recerca.

**Taula 3**

*Esquema resum del procediment metodològic de la recerca*

	<b>Estudi I</b>	<b>Estudi II</b>	<b>Estudi III</b>
<b>Títol</b>	Measure of the sport trajectory through the “Sports Trajectory Questionnaire” a life span instrument	Sport trajectory over a lifespan perspective. A comparative study between managers and general population.	Leader development across the lifespan through sport and physical activity
<b>Objectiu</b>	Dissenyar i validar un qüestionari capaç de recopilar la trajectòria esportiva d’una persona	Analitzar la pràctica esportiva dels mànagers vers la població general	Explorar la incidència de la trajectòria esportiva dels mànagers en el desenvolupament del lideratge que exerceixen
<b>Participants</b>	Estudiants de Cicles formatius esportius (n=129)	Població general (n=274) i mànagers (n=86)	Mànagers (n=17)
<b>Instruments</b>	Qüestionari qualitatiu (STQ)	Qüestionari qualitatiu (STQ)	Entrevista semi-estructurada
<b>Anàlisi de dades</b>	Microsoft Excel	Microsoft Excel	Open Code versió 4.03



## **CAPÍTOL 4. ESTUDI I: SPORT AND PHYSICAL ACTIVITY ACROSS THE LIFESPAN: "SPORTS TRAJECTORY QUESTIONNAIRE"**

"Tomorrow's leaders get their training by dealing with today's challenges"

Carlos Ghosn, CEO of both Nissan and Renault

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Aquest article s'ha publicat a la Revista Aloma i es pot trobar a l'annex 5 d'aquest document.

Riera, V., & Moragas, M. (2021). Sport and physical activity across the lifespan: "Sports Trajectory Questionnaire". *Aloma: Revista de Psicologia, Ciències de l'Educació i de l'Esport*, 39(1), 73-83. <https://doi.org/10.51698/aloma.2021.39.1.73-83>





## Introduction

Sport has been recognized as of paramount importance for the development of individuals across the lifespan. Lifespan developmental psychology (LP) is an orientation that concerns with the description, explanation, and modification of developmental processes in the human life from conception to death (Baltes, Reese & Lipsitt, 1980). This perspective is based in the assumption that development does not stop when adulthood is achieved, but that each period of life has its own challenges and developmental successes and these adaptive processes work in all periods of life. It is about comparing the development of an individual with that of others and with the person's own state at different times (Baltes, Lindenberger & Staudinger, 2006).

This perspective has been adopted from a wide range of researches to study the role of physical activity (PA) and sports practice (SP) in the human development at different stages across the lifespan. Traditionally, childhood is one of the most studied stages due the assumption that earlier age periods are viewed as precursors for or contributors to later periods of development (Malina, 1996) but nowadays, there is many literature that focus on adulthood and elder age. Early childhood is marked by the most critical and intensive period of brain development throughout the human lifespan achieving 95% of its maximum size by 6 years old (Khan & Hillman, 2014). From this premise, Carson et al., (2016) performs a systematic review to analyze physical activity and cognitive development in early childhood. The results provide evidence that physical activity may have beneficial effects on cognitive development during early childhood. These conclusions are in line with the findings in other stages of the life cycle showing that higher amounts of physical activity improve cognitive functioning (i.e. concentration, attention) and academic achievement in school-aged children and youth (Biddle & Asare, 2011; Bidzan-Bluma & Lipowska, 2018; Castelli et al., 2014; De Greeff, Bosker, Oosterlaan, Visscher & Hartman, 2018; Erickson, 2019; Taras, 2005) and reduce the risk of age-related cognitive decline, dementia, and Alzheimer's disease in adulthood (Farina, Rusted & Tabet, 2014; Fondell et al.,

2018; Hakala et al., 2019; Sofi et al., 2011) or the reduction of dementia and improvement of cognitive function and brain plasticity in elder age (Engeroff et al., 2019; Gajewski & Falkenstein, 2015; Prakash, Voss, Erickson & Kramer, 2015; Najjar, 2019).

Based on the fact that PA and SP impact on the development of a healthy life, the research moves one step forward and analyze the way sports and PA is practiced affects the development (Predovan, Julien, Esmail & Bherer, 2019; Netz, 2019). Some researchers examined the associations between the context in which physical activity is undertaken (team sports, informal group, individual PA), and each of positive mental health, anxiety symptoms and depressive symptoms in early adulthood proving that promoting PA in organized (team sports) and non-organized (informal group) social contexts, is likely more effective than individual PA, in enhancing positive mental health and reducing depressive symptoms among youth in transition to adulthood (Doré, O'loughlin, Schnitzer, Datta, & Fournier, 2018). In the same line, Stephan et al. (2014) conducted the first study to reveal that personality is associated with the adoption of an active lifestyle across multiple domains, involving a combination of frequent physical, cognitive, and social activities This study contributed to existing knowledge on psychological traits associated with the adoption of an active lifestyle across the lifespan. As a result of the miscellaneous outcomes that physical activity and sport practice entails, analyzing its engagement across the lifespan has become one of the most studied topics.

After analyzing how the data referred to PA and SP is collected during the life cycle, it is found that traditionally, the collection of data regarding these aspects has been assembled through different kind of instruments. On the one hand there are different questionnaires that collect this information at a certain time. That is to say, the information about the PA and SP that has been done at a specific moment in life is collected (Ferrando, 2006; Forsén et al., 2010; García-Bengoechea, Sabiston & Wilson, 2017; Godin, 2011; Godin & Shephard, 1985; Herman, Craig, Gauvin & Katzmarzyk, 2009) or even instruments that collect data regarding PA and SP at a certain time with the objective to create profiles as decisional profiles of athletes (García, Ruiz, & Graupera, 2009) or physical self concept profiles (Guijarro-Romero, Mayora-Vega, Viciano, Casado-Robles, Gråstén, & Jaakkola, 2020). On the

other hand, some researches use surveys to collect data about the SP & PA practiced during the last 6 months or 1 year (Nowak, Plewa, Skowron, Markiewicz, Kucio & Osiadlo, 2010; Simpson, 2011) or some specific questionnaires (i.e. competitive sport, motivation for participation) that collect data regarding some particular topic related with SP & PA over a lifetime (Gavin et al., 2014; Sikka, Fetzer, Hunkele, Sugarman & Boyd, 2015; Sorenson, Romano, Scholefield, Schroeder, Azen & Salem, 2015). Finally, there are interviews of all kind to collect data from the sport history (Kendellen & Camiré, 2019; Puig, Morell & Rees, 1996; Shih, Liew, Krause & Ritz, 2016) but it was not found any questionnaire that puts together data about the physical activity performed during the life cycle of a person.

Consequently, the aim of this research is (1) to design an on-line instrument intended to collect all the information regarding SP & PA practiced beyond a lifetime of an individual that can be administrate it at any time to the sample quickly and effectively (2) to create profiles that can be compared with any variable to study the role of physical activity and sport practice in the development of different aspects across the lifespan.

## Method

### *Participants*

A total of 129 students (18 girls and 111 boys) aged 15 to 25 years old from three schools in Catalunya were recruited for this study: School A (75%), School B (15%) and School C (10%). The students were enrolled in one vocational training course: 45,7% of the sample was enrolled in the studies named CAFEMN (Conducting physical activities in the natural environment), 34,9% of the students were studying the 1<sup>st</sup> year of a vocational training named AFE (Animation of physical activities and sports) and the 19,4% remaining, were enrolled in the 2<sup>nd</sup> year of AFE. All participants were informed about the research and provided with the informed consent about their participation in this study, which was carried out following the principles of the Declaration of Helsinki.

*Procedure*

The Sports Trajectory Questionnaire (STQ) it's an on-line and self-administrated questionnaire created following the premise of some authors that self-report questionnaires are the most practical way of gathering data among large and diverse population (Sorenson et al.2015). After conducting a literature review and consulting with experts in the field it was delimited the construct with 2 dimensions corresponding to 2 sections, 6 variables and 109 items as it appears in Table 4.

**Table 4**

*Dimensions, variables and Indicators for the design of the STQ*

<b>DIMENSIONS</b>	<b>VARIABLES</b>	<b>INDICADORS</b>
Demographics	Personal information	Age, sex, e-mail, level of studies, civil status, children, number of children
	Employment Status	Occupation, economic sector and labor segment.
Physical activity and sport practice	Sport Practice	Practice, Sport, Frequency, Long term commitment, mode, level, sport organization and with whom
	Withdrawal	Sport practice abandonment, duration, stages and motives
	Sport roles	Captain, sport technician, judge/referee, sport delegate, sport coordinator, management, board of directors, presidency, sport, years in charge, start stage, organization, salaried
	Sponsorship	Sponsorship, years of sponsorship and start stage

The dimension demographics has to 2 variables and 10 indicators scored with open responses and multi-choice responses. The dimension Physical Activity & Sport Practice across the lifespan has 4 variables analyzed by 99 items. The first variable is organized by 5 stages (early childhood, childhood, adolescence, young adulthood and adulthood) corresponding to the literature review (Baltes et al. 1980; Day, 2011). All indicators are scored with open responses and multi-choice responses (Table 5).

The validation of the construct was performed in two phases: The first stage was carried out by three experts in the field of sociology of sports from three different sport schools who suggested some improvements regarding the stages of development and the ethical consent. The second stage of the validation concluded with a final version of the survey that was validated by 10 experts in the sports field from the Ramon Llull University. In both cases, the validation of the construct consisted in an on-line survey by Google Forms where the experts assessed the questionnaire through 4 variables and 50 indicators: Coherence (López-Roldán & Fachelli, 2015; Riba, 2016), relevance (López-Roldán & Fachelli, 2015; Heinemann, 2008; Riba, 2016), exclusivity and semantic completeness (Hernández, Fernández & Baptista, 2010; López- Roldán & Fachelli, 2015; Riba, 2016;) and the formal aspects (Heinemann, 2008). This development process is detailed in Table 6.

At each stage of the development process (Figure 6), the survey was revised to include comprehensive content, improve clarity and usability for the survey taker and minimize opportunities for bias. It was designed with a pleasant visual composition along with a careful language. The on-line questionnaire can be found at <http://stq.sportupp.com>.

Once the final version of the survey was validated by experts, a retrospective cross-sectional design was carried out to analyze the sports trajectory of students of educational training cycles as a Pilot Test of the STQ. The first author contacted school board administrators to explain the study and ask for permission to collect data. Once permission was granted, the principal researcher and two trained researchers explained the study to potential participants in three different schools. After the written assent was provided, it took place the data collection in groups of 10-15 in the computers room of the schools.

**Table 5**

*Sports Trajectory Questionnaire Content*

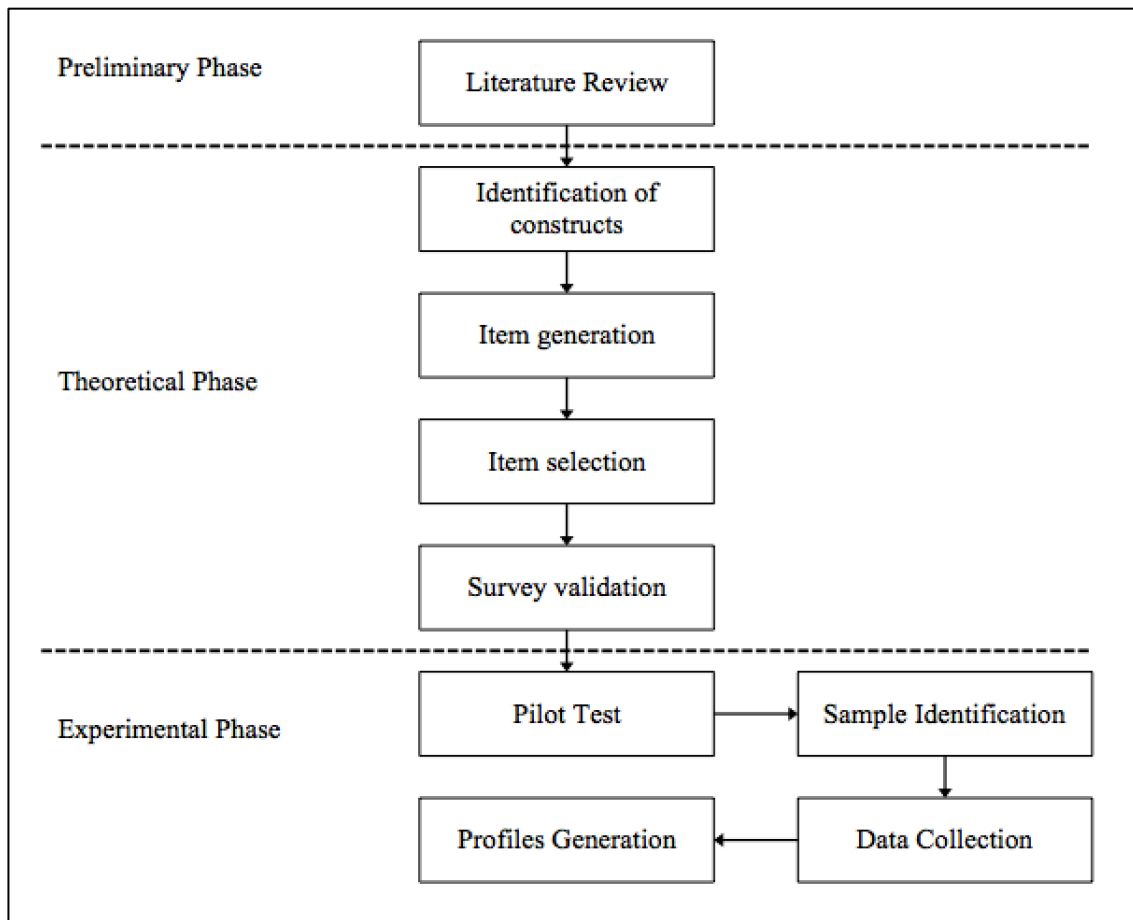
<b>Survey Section</b>	<b>Description</b>	<b>Scoring</b>	<b># Items</b>
Section I: Demographics	Age, sex, Birth date, level of studies, civil status, children and number of children, occupation, economic sector, economic segment and e-mail)	Open response (e-mail, number of children), 2 and 6 level multiple choice response (age, sex, level of studies, civil status, children, occupation, economic sector and segment sector)	10
Section II: Physical Activity & Sport Practice across the lifespan	Practice, Sport, Frequency, Long term commitment, mode, level, sport organization and with whom Sport practice abandonment, duration, abandonment stages and motives, captain, sport technician, judge/referee, sport delegate, sport coordinator, management, board of directors, presidency, sport years in charge, start stage, organization, salaried, Sponsorship, years of sponsorship and start stage	Open response (sport, abandonment stages and years of sponsorship) and 2, 3,4,5,6 and 8 level multiple choice response (Frequency, long term commitment, mode, level, sport organization and with whom Sport practice abandonment, duration, abandonment stages and motives, captain, sport technician, judge/referee, sport delegate, sport coordinator, management, board of directors, presidency, sport years in charge, start stage, organization, salaried, Sponsorship and start stage	99
Total			109

**Table 6***Construct validation*

<b>Experts</b>	<b>Field of expertise (Years)</b>	<b>University</b>
Primary Authors *		
Joan M. Batista-Foguet, PhD	Organizational behavior and quantitative statistics	ESADE-Ramon Llull
Marta Moragas, PhD	Sports management	Blanquerna FPCEE- Ramon Llull
Verònica Riera, PhD Student	Sport science	Blanquerna FPCEE- Ramon Llull
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Maria Giné, PhD	Health and Physical Activity	Blanquerna FPCEE- Ramon Llull
Marc Llinàs, AT	Sport Science	Blanquerna FPCEE- Ramon Llull
Adrià Martín, PhD	Sports Sociology and law	Escola Universitària de Salut i Esport (EUSES)
José Morales, PhD	Athletic Performance	Blanquerna FPCEE- Ramon Llull
Ricardo Sánchez, PhD	Sports Sociology	Blanquerna FPCEE- Ramon Llull
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Josep Solà, PhD	Physical and Sports Education	Blanquerna FPCEE- Ramon Llull
Susana Soler, PhD	Sports Sociology	Institut Nacional d'Educació Física de Catalunya (Barcelona)

*Note:* Primary authors were responsible for the authorship, revision, and approval of the survey instrument. Contributing advisors reviewed, provided feedback, and suggested edits to the survey

The STQ was responded in the presence of a trained researcher, who explained the procedure and monitored the time. The subjects did not receive any monetary nor academic reward for their participation.

**Figure 8***The Sports Trajectory Questionnaire development program*

### *Data Analysis*

To analyze the data, four variables were selected due to the findings after the revision of the literature about the influence of some parameters of the practice of sports and physical activity to the development of an individual during the lifetime (Table 7). To analyze each variable four methods of coding were applied: The first method of coding pertained to the variable sport participation in each stage (1, Yes; 2, No). The second type of coding looked at the variable number of sports (1, One sport; 2; Two sports; 3; Three or more than three sports). The third method related to the variable kind of sports has 3 options (1, Individual; 2, Collective; 3, Both individual and collective).



**Table 7**

Variables and Indicators to analyze data from STQ

Variables	Indicators	References
Sport Practice	Yes (1)	Allen et al. (2013), Coakley (2011), Danish et al. (1993), Gould & Carson (2008), Eime et al. (2013), Kleiber & Roberts (1981), Macphail & Kirk (2006)
	No (2)	
Competition	Competitive sport (1)	Coté, Lidor & Hackfort (2011) Dionigi, Baker & Horton, (2011); Musch, & Grondin, S. (2001) Scanlan, & Lewthwaite, (1986)
	Non-competitive sport (2)	
	Both (3)	
Kind of sport	Individual (1)	Gené & Latinjak (2014), Korovljević et al. (2016), Madic et al. (2016).
	Collective (2)	
	Both (3)	
Number of sports	One (1)	Reverter et al. (2009) Wiersma, L. D. (2000).
	Two (2)	
	Three or more (3)	

Finally, the last method of coding refers to the variable competition (1, Competition; 2, No competition). Once the data was coded, the researchers create profiles depending on the combination of the 4 variables. This combination shows 28 possible options as it appears in table 8. From these 28 possible options there are 5 that are ruled out by the impossibility of their combination (Profiles 8, 17, 20, 23 and 26), so that it can be established that there are 23 possible profiles.

This technique is used in each stay of development, in this manner each person has a profile for each stage of the development. To obtain a final profile, it was established to use the mode and the relevance of the 1<sup>st</sup> and 2<sup>nd</sup> stage of the development. Once the data was coded, the researchers divided the data from 129 students into profiles depending on the combination of the 4 variables.

These classifications provide a convenient way to analyze the similarities and differences between profiles and to provide a possibility to generalization about profiles of PA and SP and any other variable. The statistics used to analyze the data are the Fischer's exact test and the two-tailed p-value.

## Results

The results showed that 6 profiles out of 23 options fit for 86% (median) of the students (Table 6) This six predominant profiles correspond to Profile N°1 (Non sport practice at some stage of the sport trajectory), Profile N°2 (One sport, individual and competitive), Profile N°5 (One sport, individual and non-competitive), Profile n°11 (One sport, collective and competitive), Profile N°14 (One sport, collective and non-competitive) and Profile N°27 (Two sports, individual and collective, competitive and non-competitive) as it is showed in Table 6.

The present study indicates that the practice of physical activity and sports for this specific sample increases with age showing a 94% of participation at 3<sup>rd</sup> stage 13-16 (Table 9). This PA & SP prevails during all stages of life in 70,5% of the sample while the late initiation starting at second stage (7-12) in the sport practice is 14%, and 4,6% of the sample doesn't practice until the third stage (13-16), so 18,6% of the sample have a late initiation in the PA& SP. An intermittent practice is present in 7,7% of the population, which means that at some point of their lifespan they abandon the practice during one stage but they engage at the following stage. Finally, the abandon of sport practice is 3,1% in this sample.

**Table 8***Profiles coding development process*

<b>Profile Code</b>		<b>Practice <sup>v1</sup></b>	<b>Quantity <sup>v2</sup></b>	<b>Sport <sup>v3</sup></b>	<b>Competition <sup>v4</sup></b>
2000	Profile 1	2	0	0	0
1111	Profile 2	1	1	1	1
1211	Profile 3	1	2	1	1
1311	Profile 4	1	3	1	1
1112	Profile 5	1	1	1	2
1212	Profile 6	1	2	1	2
1312	Profile 7	1	3	1	2
1113	Profile 8*	1	1	1	3
1213	Profile 9	1	2	1	3
1313	Profile 10	1	3	1	3
1121	Profile 11	1	1	2	1
1221	Profile 12	1	2	2	1
1321	Profile 13	1	3	2	1
1122	Profile 14	1	1	2	2
1222	Profile 15	1	2	2	2
1322	Profile 16	1	3	2	2
1123	Profile 17*	1	1	2	3
1223	Profile 18	1	2	2	3
1323	Profile 19	1	3	2	3
1131	Profile 20*	1	1	3	1
1231	Profile 21	1	2	3	1
1331	Profile 22	1	3	3	1
1132	Profile 23*	1	1	3	2
1232	Profile 24	1	2	3	2
1332	Profile 25	1	3	3	2
1133	Profile 26*	1	1	3	3
1233	Profile 27	1	2	3	3
1333	Profile 28	1	3	3	3

*Note:* Profiles that are impossible to exist due the combination of their variables

**Table 9***Predominant profiles in each stage*

	<b>Stage 1</b> <b>(2 to 6 years)</b>	<b>Stage 2</b> <b>(7 to 12 years)</b>	<b>Stage 3</b> <b>(13 to 16 years)</b>	<b>Stage 4</b> <b>(17 to 25 years)</b>
<i>Profile 1</i>	35	10	8	6
<i>Profile 2</i>	4	10	17	7
Profile 3	0	0	2	1
Profile 4	0	0	0	0
<i>Profile 5</i>	30	12	10	19
Profile 6	4	4	0	1
Profile 7	1	0	0	1
Profile 9	0	4	2	4
Profile 10	0	1	0	0
<i>Profile 11</i>	18	38	59	37
Profile 12	0	0	1	0
Profile 13	0	0	0	0
<i>Profile 14</i>	25	30	12	5
Profile 15	0	0	0	0
Profile 16	0	0	0	0
Profile 18	0	1	0	1
Profile 19	0	0	0	0
Profile 21	0	4	3	2
Profile 22	0	0	2	0
Profile 24	3	5	2	3
Profile 25	4	0	0	1
<i>Profile 27</i>	4	5	9	5
Profile 28	1	5	2	3
Predominant profiles	116	105	114	81
Total Students	129	129	129	96*
	89,9%	81,4%	88,4%	84,4%

*Note:* 33 students are younger than 17 years old, the results doesn't include them.

The results of analyzing the variable competition (Table 10) show that competitive sports are predominant in all stages except the first one (2-6 years old) increasing with age and reaching its maximum at 3<sup>rd</sup> stage 13-16 with a 69,4% of participants. The competitive profile is present in 19,7% of the population, which means they practiced competitive sport during all stages, while a non-competitive profile represents 5,5% of the sample. Data analysis shows that it doesn't exist a profile represented by practice in both modalities during all life cycle. Finally, the most common profile is a mixed intermittent profile (74,7%) that intersperse different modalities of sport: Competitive, Non-competitive or both of them. 41,2% of this mixed intermittent profile changes from non-competitive to competitive sports at the second stage (7-12).

The analysis of the variable kind of sport (Table 10) shows that the practice of collective sports is predominant during all stages reaching its maximum at 3<sup>rd</sup> stage with 59,5% of participants. An individual profile that practices individual sports during all stages represents 7,7% of the population, while a competitive profile represents the 27,47%. The mixed profile that practice both individual and collective sports during all stages is present in 4,4% of the sample and it's the mixed intermittent profile that changes from individual, collective or both that represents the most part of the sample (60,4%).

Finally, the results of the variable number of sports indicate that the practice of a single sport is prevalent during all life for the most part of the sample (Table 10). The profile that practice one sport across the lifespan represents the 65,9% of the population, while the profile that practice two sports during all stages is just 1,1% of the sample and there is no sign of a profile that practices 3 or more sports during all stages. Finally, the mixed intermittent profile that changes quantity of sports or physical practices during stages represents the 32,9% of the sample.

The results of the Fisher's exact test for assessing the independence of gender and profile in stages where collective sports are predominant (stage 13-16 and stage 17-25) show a dependency between gender and sport profile. Similar profiles were grouped and then the groups with higher frequency on the stage were selected. The two tested groups are profiles 5 & 6 (individual non-

competitive sports), and profiles 11 & 12 (collective competitive sports). The resulting two-tailed p-value of 0.00118 shows a dependency between gender and sport profile at the stage of 13-16 and the two-tailed p-value of 0.0071 shows a dependency between gender and sport profile at the stage of 17-25.

**Table 10**

*Sport practice, competition, kind of sport and number of sports across the lifespan*

	Stage 1: 2-6 years old	Stage 2: 7-12 years old	Stage 3: 13-16 years old	Stage 4: 17-25 years old*
<b>Participation</b>				
Sport Practice	94	119	121	90
Non Sport Practice	35	10	8	6
<b>Competition</b>				
Competitive	23	52	84	47
Non Competitive	67	51	23	30
Both	4	16	14	13
<b>Kind of sport</b>				
Individual	39	31	31	33
Collective	43	69	72	43
Both	12	19	18	14
<b>Number of sports</b>				
One sport	81	90	98	68
Two sports	10	23	19	17
Three or more sports	3	6	4	5

*Note:* 33 students are younger than 17 years old, the results don't include them.

Finally, it was studied the correlation between the variables kind of sport (individual and collective) and competition (competitive and non-competitive) with the Fisher's exact test. The resulting two-tailed p-value of 0.0023 shows a dependency at the stage 2-6 years. This dependency is not present in the stages 7-12 (0.1680) and 13-16 (0.0638) but it shows dependency again at the stage 17-25 with the two-tailed p-value equal to 0.0001.

## Discussion

The objective of this study was to design an instrument capable to collect all the information regarding SP & PA practiced beyond a lifetime of an individual that can be administrate it at any time to the sample quickly and effectively. In this research, it was designed and developed a questionnaire being proved to be the best way to approach in large populations as it was corroborated in previous studies (Brace, 2018). The role of the questionnaire is to provide a standardized interview across all subjects at it was done through the designed questionnaire. This is so that all respondents are asked the questions that are appropriate to them, and so that, when those questions are asked, they are always asked in exactly the same way (Brace, 2018). Face validity was assured by including consultation with experts in the field and review of associated literature (Rattray & Jones, 2007). STQ is an effective instrument for collecting data about the history of physical activity from childhood to adulthood. The design of the instrument had to be able to create profiles that can be compared with other variables to study the role of physical activity and sport practice in the development of different aspects across the lifespan. Results show that based on the combination of different variables some profiles can be generated using the Lifespan Development Perspective, which support the study of Howie, McVeigh, Smith and Straker (2016).

Contrary to results of some studies (Haskell, et al., 2007; Sisson & Katzmarzyk, 2008; Sallis, 2000), the participation of the sample in physical activity and sport practice increases with age. The explanation to this contradiction comes from the characteristic of the sample, which is formed by vocational trainees from the sports field. The results of the variable participation show 4 profiles:

consistent sport participants, late initiation sport participants, intermittent sport participants and abandon sport participants. These profiles match with the total of profiles suggested by Howie et al. (2016).

The analysis of the variable competition show that competitive sports are predominant across the lifespan except early childhood increasing with age and reaching its maximum at adolescence. These outcomes prove previous studies that suggest that the reason is due the motivation of the practice (De Pero, Amici, Benvenuti, Minganti, Capranica, & Pesce, 2009). The results of this variable across the lifespan show three profiles: competitive, non-competitive and mixed intermittent profile. The analysis of the variable kind of sport determines that practice of collective sports is predominant during all stages of the life cycle of the sample. These findings can be explained due the social acceptance that generates the practice of collective sports (Korovljev et al. 2016). This variable generated four profiles: Individual sport practitioners, collective sport practitioners, mixed sport practitioners and mixed intermittent sport practitioners. Finally, the analysis of the variable number of sports indicates that the practice of a single sport is prevalent across the lifespan. An explanation of this finding could be found in the characteristics of the sample that were specialized in one sport to achieve elite sport (Wiersma, 2000). The profiles generated by this variable are: one single sport practitioners and mixed intermittent practitioners. All profiles generated by these three variables cannot be compared with any previous research that has studied this before; therefore, these outcomes offer a new line of study in the sport science.

The results after applying Fisher's exact test show that the variables gender and sport profiles are dependent so there is a higher probability of being profile 5&6 (individual-non competitive sports) for women than men and a higher probability of being profile 11&12 (collective competitive sports) for men than women. These results could be explain following the social construction gender research of Dworkin & Messner (2002) who conclude that organized sport has overblown the cultural hegemony between male athletes and female athletes due to the persistence of conventional masculinity and femininity.



On the other hand, the dependency in the variables kind of sport and competition showed differences between stages. In the first stage (2-6 years) the two-tailed p-value showed a strong dependency, which means that individual sports are more likely to be practiced in a non-competitive manner and collective sports are more likely to be practiced in a competitive way. In the second stage (7-12 years) there is no dependency, so individual and collective sports are practiced both ways competitive and non-competitive without any correlation. In the third stage (13-16 years) the p-value is 0.0638. Following the criteria this shows a non-strong dependency between variables but it can be appreciated that collective sports, unlike individual sports where there is no trend, are most likely to be competitive than non-competitive. Finally, the last stage (17-25 years) showed a strong dependency; individual sports are more likely to be non-competitive and collective sports are more likely to be competitive.

It was not found any research that support these results but it could be explained through a cultural perspective of how sport is practiced in Catalunya. It starts at early childhood (Stage 2-6 years) through after-school activities where competing in a collective sport in school leagues is more frequent than competing in individual sports that are practice to achieve other objectives as learning how to swim. During adolescence most of the teenagers choose a collective sport to be accepted as part of a group as it was explained before, and this sport it is usually practiced in a sport club where they are usually federated and competing in different kind of leagues depending of the sports level of the club. Finally, at young adulthood some practitioners continue competing with the same club as before but there are some practitioners that chose to practice sport by their own in a non-competitive way.

## Conclusions

Beyond the development of a questionnaire, it is important to underline the great possible practical benefits that this may have generating profiles. The combination of the four variables that it was explained before generates 23 possible profiles that will show different representation depending on the sample. In this case 6 profiles were generated out of 23. The results of this study continue to support the growing literature analyzing sport practice across the lifespan (Predovan et al. 2019). Nevertheless, this study has some limitations. Firstly, the results found are representative of a small sample, with predominately male individuals, thus it would be desirable to replicate the study with a bigger and more heterogenic sample. And secondly, the last stage of the questionnaire can be divided in more stages to collect separate data from adulthood to elderly. The researchers are currently developing the instrument further to minimize the limitations.

For future research, one recommendation would be to analyze the profiles of the participants and its influence in the development of some variables across the lifespan (i.e. leadership, motivation, diseases) at it was investigated with other instruments (Brunet & Sabiston 2011, Howie, Ng, Beales, McVeigh & Straker, 2019; Novak et al., 2010). This instrument breaks new ground and provides the potential for examining the sport practice during all the life cycle of an individual. Perhaps, ultimately, this line of research will promote an alternative perspective for analyzing the development of an individual through physical activity and sport practice.

This is the first study that designs an on-line self-administrated questionnaire to collect data regarding the sport and physical practice of a person during all their life. In conclusion, the Sport Trajectory Questionnaire seems to be an effective instrument to collect the physical activity and sport practice of an individual at any moment across the lifespan and generate profiles that can be used to analyze the variable sport practice and physical activity with any other variable.



**CAPÍTOL 5. STUDY II: SPORT TRAJECTORY OVER A LIFESPAN  
PERSPECTIVE. A comparative study between managers and general  
population in Barcelona**

“The only source of knowledge is experience”

(Albert Einstein)

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Riera, V., Moragas, M & Pujadas, X. (2022). Sport trajectory over a lifespan perspective. A comparative study between managers and general population in Barcelona <https://www.ripped-online.com/articles/sport-trajectory-over-a-lifespan-perspective-a-comparative-study-between-managers-and-general-population-in-barcelona-86190.html>



## Introduction

The new social paradigm that has emerged during the last decade encompassed by a context of pandemic during the last two years, arises the need to find referents who can make the right decisions. Organizations are working hard to find leaders who can adapt to these changes and provide the necessary answer by implementing all kind of leadership development programs trying to influence it with effectiveness (Avolio *et al.*, 2009 & Lacerenza *et al.*, 2017).

Most of the research around leadership, has focused on developmental experiences that occur during adulthood, analyzing adult leaders and managers. Although research suggest that there are some human capital factors like expertise, identity or adult experiences that impact on leadership development during adulthood (Day *et al.*, 2009), there is a growing literature that focus on social capital implying that building relationships and network connections are effective in improving executive performance (McCallum & O'Connell, 2009; Meirovich & Goswami, 2021 & Van de Valk & Conostas, 2011).

However, during the last decade, another stream of thought has emerged focusing leader development across the life span of an individual. Lifespan developmental psychology (LP) is an orientation that concerns with the description, explanation, and modification of developmental processes in the human life from conception to death (Baltes *et al.*, 1980). This perspective is based in the assumption that each period of life has its own challenges and developmental successes. It is about comparing the development of an individual with that of others and with the person's own state at different times (Baltes *et al.*, 1999).

The research around developmental psychology has demonstrated that childhood and adolescence are the stages of development which significant changes taking place both at the motor, cognitive and emotional levels (Fischer, 1980 & Gardner, 2011). It is a sensitive period where all the lived experiences can influent more significantly the identity construction of an individual (McAdams & Zapata-Gietl, 2015) and, therefore, these early experiences create the foundation for future leadership development to build on (Murphy & Johnson, 2011). As it is suggested in some studies,

participation in some organized activities, like sports during childhood and adolescence (Liu *et al.*, 2020 & Murphy & Johnson, 2011) may influence the development of the leader and predict behaviours in adulthood (Howie, 2016).

Regularity of practice on a lifespan perspective has been extensively studied over the years by numerous scientists, mostly focused on the study of the healthy lifestyle or wellbeing of the population (Hyde *et al.*, 2013). However, there is an increasing interest among identifying sport trajectories (Howie *et al.*, 2016) and long-term patterns of physical activity that could be used as a behavior predictor, to work on different collectives. (Barnett *et al.*, 2008 & Palomäki *et al.*, 2018).

Following this line of investigation, Mäkelä *et al.* (2017) examined whether a greater diversity of sport activities during adolescence predicts higher levels of LTPA in adulthood and concluded that a greater diversity of leisure-time sport activities in adolescence predicts higher levels of LTPA in adulthood in females but not in males.

In this sense, the investigation carried out by Riera & Moragas (2021) showed that the variables of regularity of practice, kind of sports and competitiveness are key elements to analyze the sport trajectory of an individual. Also, it was shown how the combination of them could be used to build sport profiles to analyze the variable sport practice and physical activity with any other variable as leadership.

During the last decades, the controversy around the benefits of practicing collective sports versus individual sports has entailed some studies analysing how the variable kind of sport could impact in the development of certain personality traits showing significant differences between individual and collective sports. (Weinber & Gould, 2014).

Related to this matter, Madic *et al.* (2015) found that practitioners engaged in individual sports showed more tendencies to observe the rules, disciplined behavior, greater accountability to the commitments and greater emotional stability. They are self-motivated (Gené & Latinjak, 2014) and they have a higher ability to control themselves, probably because they found themselves in situations of making independent decision, they bear the responsibility for success of the achievement

of the results (Frank, 2009). Furthermore, athletes playing individual sports had higher scores on “planning” and “effort” than team sport athletes (Jonker *et al.*, 2010).

On the other hand, athletes who are engaged in team sports show higher levels of extraversion (Allen *et al.*, 2011) and social acceptance, they feel better among peers and they have more pronounced ability to form friendships (Korovljev *et al.*, 2016). They also show higher levels on agreeableness and sociotropy than individual sport athletes, this could be explained because team sports provide a suitable ground for achieving trust, an interpersonal factor that give the individual the possibility to rely on others more easily and develop the group activities and relationships and also, altruism and compliance combined with intensity and arrangement. (Nia & Besharat, 2010). Team sports usually request higher levels of interdependence and social interaction (Van Vianen & De Dreu, 2001). The team sport athletes scored significantly higher on agreeableness and sociotropy than did the individual sport athletes.

Competitive sport understood as any organized sport activity in which training and participation are time-consuming and in which the level of performance meets relatively high standards of expectation (Coakley, 1983), provides unique benefits to participants above and beyond those gained from general physical activity (Dionigi *et al.*, 2011). Some authors (Allen & Laborde, 2014) found that organized sport represents a competitive context in which some personality traits have been found to coincide with greater levels of success. Competition, provide with an opportunity to develop leadership skills through playing with older peers (Wright, & Côté, 2003) and higher levels of extraversion (Madic *et al.*, 2015).

These investigations show how physical activity and sport practice could be an impact factor in the development of the leader that is why arises the necessity to study the sport trajectory in a sample of managers compared with the general population in Barcelona (Spain). The approach of this research is going to focus on the contribution of Physical Activity (PA) and sport practice (SP) to leadership development across the lifespan from the point of view of the Lifespan developmental psychology perspective. Consequently, the aim of this research is (1) to describe the SP & PA practiced



beyond a lifetime of a sample of managers and (2) to analyse the findings between this sample and the general population to investigate if sport practice could be an effective element in leader development.

## Design

### *Methods*

A quantitative retrospective cross-sectional design was carried out with the purpose of examining if sport practice could be an effective element in leader development. Data were gathered using the validated questionnaire named Sports Trajectory Questionnaire (STQ). It is an online self-administrated questionnaire that collects all the information regarding the sport trajectory of an individual during his lifespan (Riera & Moragas, 2021). The first group of participants were recruited through a post on LinkedIn and Twitter that had a direct link to the questionnaire. The questionnaire included a previous section where all the participants are informed about the research and by clicking to the bottom agreed they consented to the participation in the research and could continue filling in the questionnaire. The second group of participants were contacted one by one by e-mail or telephone. All of them were provided with all the documents informing about the research. Once the informed consent was signed, they filled in the questionnaire.

### *Participants*

A total of 360 participants (150 women and 210 men) aged 18 to 65 years old (Me 37,68 & s 8,98) from Barcelona were recruited for this study in two different stages. The first sample correspond to a non-probabilistic voluntary response sampling composed by 274 participants (127 women and 147 men) labelled as general population, who were recruited through and add in social media (LinkedIn and Twitter). The second group correspond to a non-probabilistic snowball sampling composed by 86 managers (23 women and 63 men) aged 18 to 65 (Me 43,79 & s 9,14) from private companies in Barcelona. The inclusion criteria in this case were: a) to be manager of a private company

and b) to have five or more employees. All participants were informed about the research and provided with the informed consent about their participation in this study, which was carried out following the principles of the Declaration of Helsinki.

### *Data Analysis*

Following a previous study (Riera & Moragas, 2021), three variables were selected and coded based on the influence to the development of an individual during the lifetime. The first variable refers to the regularity of practice in sport and PA in each stage (1, Yes, if they have practiced during all stage; 2, No, if they didn't practice sports or PA during all stage). The second variable analyzed relates to the kind of sport or PA was practiced (1, Individual, if they have practiced individual sports during the stage; 2, Collective, when it was practiced collective sports during all stage; 3, Mixt, when it was practiced both individual and collective sports). Finally, the third variable measure the present or absence of the component competition in the sport practice (1, Competition, when the sport practiced was competitive during all stage; 2, No competition, if the sport of PA wasn't competitive during all stage; 3, Combined, when it was practiced both of them). Each variable was coded taking into account all the development stages of the STQ to finally create final profiles of each variable based on the mode and the relevance of the first and second stage (Childhood and adolescence) of the development. Once the data was coded, each variable was analyzed separately to study different outcomes between the two samples.

The statistical measure used to analyze the data was Chi Quadrat, which provided us with the two-tailed p-value.

### **Results**

The variable measuring regularity of practice offers two different profiles: constant, when sport was practiced across all lifespan and non-constant, when it wasn't practiced during all life. The results of analyzing this variable show that, in general terms, managers are more constant in the

practice of sport and PA than the general population. After breaking down data by decade of birth it is seen that constant regularity of practice is a common denominator for managers born from 60's to 90's whereas constant practice in general population has been increasing over the decades but it is found a decrease in people born in 90's due to a lot of abandon cases found in the sample. The results of Chi Square test for assessing the independence of the variables year of birth and regularity of practice show a strong dependency between these variables in the general population sample ( $p = 0,0016$ ). As explained before, people born in the 80's have a regular practice profile whereas in people born in 90's it is found a great level of abandon. Contrary to the general population, there is no dependency between the decade of birth and regularity of practice in managers ( $p = 0,71$ ) because all the managers have a constant profile regardless of their year of birth. The general population has been modifying the regularity of practice over time, while the average manager has been a sporty person during their entire life who at some point in their trajectory become a manager.

As shown in table 11, there are some differences between managers and the general population with respect to gender and regularity of practice. It has been found that managers have a constant profile. Most of female managers have a constant profile (69.6%) and it is even more predominant in male managers (90.5%).

However, in the non-manager sample it has been found a great equality between constant (52.4%) and non-constant profiles (47.6%). If we disaggregate this by gender, we observe that men have a slightly more constant profile (56.8%) than women (43.1%). The results of Chi Square test for assessing the independence of gender and regularity of practice in both samples, show a significant dependency in the manager sample ( $p = 0.01$ ) while there is not such dependency in the general population ( $p = 0.11$ ). Finally, the correlation between regularity of practice variable and the manager-non-manager variable shows a strong dependency. This result confirms what it has been seen at first glance examining the most frequent profiles of each sample. It is important to mention that people born during 2000 was excluded from the analysis of the variable decade of birth in all cases because

they didn't have enough time to become managers in most of the cases, but it was included in the analysis of the variable gender because it give us more information in both samples.

**Table 11**

*Regularity of practice from managers and non-managers*

		Non-Managers				Managers					
		Cons	Non-Cons	Total	Cons	Non-Cons	Cons	Non-Cons	Total	Cons	Non-Cons
Decade of birth	60	28	25	53	<b>53%</b>	47%	17	3	20	<b>85%</b>	15%
	70	30	16	46	<b>65%</b>	35%	24	4	28	<b>86%</b>	14%
	80	42	13	55	<b>76%</b>	24%	27	4	31	<b>87%</b>	13%
	90	34	41	75	45%	<b>55%</b>	4	1	5	<b>80%</b>	20%
Total		134	95	229**	58,52%	41,48%	72	12	84**	85,71%	14,28%
Gender	M	83	63	146	<b>56,8%</b>	43,15%	57	6	63	<b>90,48%</b>	9,5%
	W	58	65	123	47,15%	<b>52,84%</b>	16	7	23	<b>69,56%</b>	30,44%
Total		141	128	269**	52,41%	47,58%	73	13	86**	84,88%	15,11%

*Note:* Cons: Constant; Non-Cons: Non-Constant. Gender includes people born during 2000 while decade of birth doesn't include them.

One of the analyzed variables in the study is the kind of sport practiced by each individual regarding collectiveness (individual, collective or mixt). This variable reveals three profiles: an individual profile, when the person has a majority practice of individual sports over life; a collective profile, when the sports practice has been mostly collective sports; and a mixt profile, if a person presents a combined practice of individual and collective sports across lifespan. (Table 12). The analysis of this variable has found remarkable differences between both samples with a significant dependency ( $p=0.049$ ). The mixt profile is prevalent in the managers sample (47.61%) while the

individual profile is prevalent in general population (41.48%). It has also been analyzed the relationship between the kind of sport and the decade of birth in order to assess how it has evolved over time.

**Table 12**

*Kind of sport from managers and non-managers*

		Non-Managers						Managers							
		Col	Ind	Mixt	T	Col	Ind	Mixt	Col	Ind	Mixt	T	Col	Ind	Mixt
Decade of birth	60	10	24	19	53	18,87%	<b>45,28%</b>	35,85%	6	7	7	20	30,00%	<b>35,00%</b>	<b>35,00%</b>
	70	15	18	13	46	32,61%	<b>39,13%</b>	28,26%	6	9	13	28	21,43%	32,14%	<b>46,43%</b>
	80	15	19	21	55	27,27%	34,55%	<b>38,18%</b>	10	6	15	31	32,26%	19,35%	<b>48,39%</b>
	90	19	32	24	75	25,33%	<b>42,67%</b>	32,00%	2	1	2	5	<b>40,00%</b>	20,00%	<b>40,00%</b>
Total		59	93	77	229*	24%	<b>41,48%</b>	34,5%	24	23	37	84*	34,5%	17,85%	<b>47,61%</b>
Gender	M	47	49	50	146	32,19%	33,56%	34,25%	20	16	27	63	31,75%	25,40%	<b>42,86%</b>
	W	24	64	35	123	19,51%	<b>52,03%</b>	28,46%	5	8	10	23	21,74%	34,78%	<b>43,48%</b>
	Total	71	113	85	269*	26,39%	42%	31,6%	25	24	37	86*	29%	27,90%	43,02%

*Note:* C: Collective I: Individual Mixt: Mixt T: Total. Gender includes people born during 2000 while decade of birth doesn't include them.

The Chi Square Test has not shown any significant dependency between both variables. Individual sports have been the most usual option for non-managers born from 60s to 90s, with a little exception in people born in the 80s where the mixt profile is slightly higher than the individual. It has not been appreciated any remarkable trend from one decade to another. With regard to manager population, mixt profile is the leading one all over time. However, it has been a change in the least present profile, which was collective in 60s and 70s and individual in 80s and 90s.

After examining the results from the gender perspective, it has been found a notable dependency in the non-manager sample between gender and kind of sport ( $p=0.006$ ). Women present more often an individual profile, while men present a very similar trend in the three profiles. This dependency is not relevant in the manager's sample. Collective profiles get a very similar result in both

samples for men and women. The main difference remains in individual and mixt profiles. Both men and women managers have got a mixt profile instead of individual but this difference is very noticeable in women.

Finally, it has been studied the competitiveness profile of each individual regarding the sports that has been practiced across the lifespan. There are three possible outcomes for this categorical variable: A competitive profile, when the individual has a majority practice of competitive sports; a non-competitive profile, if the person has practiced sports but recreationally or by medical prescription; and a combined profile when people present both competitive and non-competitive sports practice. The results show that general population have a less competitive profile than managers (41.48%). As shown in table 13, managers present profiles where the combination of both competitive and non-competitive (47.61% for managers and 34.50% for non-managers) are more present than in general population. This is demonstrated with a strong dependency between the manager/non-manager binary variable and the kind of sport variable ( $p=0.00085$ ). After exploring the variable decade of birth, it is shown that managers who were born in 60's and 70's have a profile where it prevails the combined option (competitive and non-competitive) while in the managers who were born from 1980 (80's) to 1999 (90's) prevails the competitive profile. On the contrary, the non-competitive profile is predominant in the general population. The participants who were born from 1960 to 1989 have a non-competitive profile while the ones who were born during the 90' showed a combined profile.

It has been studied if there are remarkable differences in terms of gender. Combined profile is the most frequent in men, being even more frequent in the manager sample. In the other hand, non-competitive profile is the predominant one in the general population women, whereas in women manager the three profiles are equaled. Men managers have got a similar competitive profile result in both samples (31.50% & 33.34%). The difference in men results has been found in the fact that that half of non- competitive non-managers are translated into combined profile when looking at the manager sample. However, proportion of women of non-competitive profile, which is predominant in

non-manager sample, is translated both in more competitive and combined profiles in the manager sample (NC:53.65% to 30.43%; C: 21.95% to 34.78%; 24.39% to 34.78%)

**Table 13**

*Variables competition from managers and non-managers*

		Non-Managers				Managers									
		C	NC	CB	T	C	NC	CB	C	NC	CB	T	C	NC	CB
Decade of birth	60	13	28	12	53	24,53%	<b>52,83%</b>	22,64%	6	2	12	20	30,00%	10,00%	<b>60,00%</b>
	70	10	19	17	46	21,74%	<b>41,30%</b>	36,96%	6	8	14	28	21,43%	28,57%	<b>50,00%</b>
	80	10	25	20	55	18,18%	<b>45,45%</b>	36,36%	14	4	13	31	<b>45,16%</b>	12,90%	<b>41,94%</b>
	90	22	23	30	75	29,33%	30,67%	<b>40,00%</b>	3	1	1	5	<b>60,00%</b>	20,00%	20,00%
Total		55	95	79	229	24%	<b>41,48%</b>	34,5%	29	15	40	84	34,5%	17,85%	<b>47,61%</b>
Gender	M	46	43	57	146	31,50%	29,45%	<b>39,04%</b>	21	9	33	63	33,34%	14,29%	<b>52,38%</b>
	W	27	66	30	123	21,95%	<b>53,65%</b>	24,39%	8	7	8	23	<b>34,78%</b>	30,43%	<b>34,78%</b>
Total		73	109	87	269	27,13%	<b>40,52%</b>	32,34%	29	15	41	86	33,72%	17,44%	<b>47,67%</b>

*Note:* C: Competitive NC: Non-competitive CB: Combined T: Total. Gender includes people born during 2000 while decade of birth doesn't include them.

Also, it has been analyzed the relationship between regularity of practice and competitiveness variables and it has been found a very significant dependency. The part of the general population with a constant profile has a combined profile regarding competitiveness, while as it has been shown previously general population has a non-competitive profile (Chi-square test p-value of 6.75E-7). In a similar way, in the manager sample, the probability of having a non-competitive profile is very low, but is much higher for non-constant profile manager. (Chi-Square test p-value of 0.001)

In table 14 it is shown a summary of the Pearson correlation coefficients between all the variables in the study. The ones below 0.05 indicate a dependency between variables. It is rapidly seen that manager and non-manager samples behave quite differently regarding gender. Kind of sport and competitiveness in non-manager sample are related to gender whereas it is only related to regularity of practice in manager population. Another difference is found in the correlation between regularity

of practice and decade of birth. It has been found a dependency only in non-manager sample because regularity in manager has remained quite constant in managers born during the last decades while it has been evolving to a more constant profile in the non-manager sample. Table 5 show the Pearson correlation coefficient between managers and general population (non-managers) regarding the three variables studied as it was commented above. Finally, it was analyzed the Pearson correlation coefficient between the managers from the sport sector and the managers from other fields. As it is shown in table 15, there is dependency between both sectors in the variables kind of sport and competitiveness while it hasn't been found any significant correlation between sport sector and non-sport sector in the regularity of practice. Managers from the sport sector are more competitive than the rest of the sectors that are equality in all options (competitive, non-competitive or combined).

**Table 14**

*Pearson correlation coefficient for of practice, kind of sport and competitiveness, decade of birth and gender variables.*

	Decade of Birth	Gender	1	2
<i>Non-managers</i>				
1. Regularity of practice	6.12 E-8	0.11	-	-
2. Kind of sport	0.64	0.0061	0.0016	-
3. Competitiveness	0.068	0.00028	6.74 E-7	4.74 E-12
<i>Managers</i>				
1. Regularity of practice	0.071	0.016	-	-
2. Kind of sport	0.81	0.57	0.013	-
3. Competitiveness	0.27	0.17	0.0017	2.76 E-8

Notes: \*p<0.05

Although, managers from the sport sector present a profile less individual than the rest of the managers who present a profile less collective, both of them show high prevalence in mixt profile.



**Table 15**

*Pearson correlations coefficient for general population and managers samples*

	<b>Regularity of practice</b>	<b>Kind of sport</b>	<b>Competitiveness</b>
General/Manager**	8.49 E-5	0.049	0.00085
Sport/Non-sport**	0.11	0.0071	0.0026

*Note:* General population sample (non-managers) vs manager sample. Managers from the sport sector versus managers from the sport sector.

## Discussion

The current research analysed the sport trajectories of a managers' sample trying to move forward to explore the process of leader development. In accordance to Liu *et al.* (2020), the present article predicted a significant relationship between sport trajectory and leadership development. In general terms, findings of this research support the initial hypothesis that managers and non-managers have a different sport trajectory but it is important to analyse it more closely.

### *Regularity of practice*

The results of analyzing this variable, identify two trajectories in both managers and non-managers: constant and non-constant profiles. Is understood as a constant profile, people who has practiced sports or physical activities across their lifespan, while a non-constant profile refers to a sum of different behaviors as abandonment, late joiners or people who come and go from sport practice. In this regard, Barnett *et al.* (2008) identified four trajectories: inactive, increasers, active and decreaseers, depending on socioeconomic and demographic factors. More specific, Howie *et al.* (2018) identified different sport trajectories depending on the gender: consistent sport participation, that was common in both genders and non-consistent sport practitioners that varied based on gender to sport dropouts, sport joiners and non-participators.

In this research, even both genders present both profiles in both samples, managers present a predominant sport constant profile in both male (90.5%) and female (69.6%) while the non-managers' sample, show equality between the two profiles with a slightly difference in the constant profile between men (56.8%) and women (43.1%). This difference between the prevalence of the constant profile between male and female support the findings obtained by Mäkelä *et al.* (2017) suggesting that males tend to maintain their level of PA better than females. This difference is even more pronounced when a leading position is added and the person has to reconcile it with sport, family and personal life as it happens with women managers. In this case, it's difficult to find time for everything so they tend to choose work and family while men that can reconcile all factors is due to a third party (Moragas, 2014).

In the same direction, after exploring the results by decade of birth it is showed that managers present a constant profile over time while general population have an increasing constant profile during 60's, 70's and 80's and a non-constant profile in people born in the 90's. These results are in accordance to Breuer & Wicker (2009) who performed a longitudinal study demonstrating that sports activity increases with increasing age in general population. The difference found in people born in the 90's are in accordance to Keating *et al.* (2005) who carried out a meta-analysis in which they found that, nowadays, about 50% of college students don't participate in adequate amounts of PA. Guided by the social cognitive theory, researchers identified 4 different determinants of college students' PA: personal, social, cognitive, and environmental factors that can explain this results and suggest that current colleges don't encourage students to be an active adult. Although every year there is more engagement to sport practice among the Catalan population (Observatori Català de l'Esport, 2016) this practice is not constant due to the abandonment of adolescents and young people (García & Llopis, 2017). In relation to the constant practice of sport among managers, there is not enough literature that could explain these finding beyond thinking that average manager has been a sporty person during their entire life who at some point in their trajectory become a manager.

### *Kind of sport*

Three trajectories were identified, in both samples, derived from exploring the participation in individual and collective sports or physical activities: individual, collective and mixt (both individual and collective). In accordance to AFEC, 2019, the results of this study, found that individual profile is prevalent in general population. In the other hand, managers show a mixt trajectory. It was not found literature that can support or contradict the results found around the managers sample, but, these results, can be the effect of a positive youth development as it is suggested in the study carried out by Agans & Geldhof (2012) who investigate the developmental effects associated with participation in individual sports, team sports, and dance-type sports across a stage of life of 3 years. The results indicated that youth who participated simultaneously in both individual and team sports, showed the most favorable outcomes in Positive Youth Development.

The differences found between the two samples regarding the variable kind of sports, are important with regard to the psychological characteristics according to the type of sport as suggested by Weinberg & Gould (2014) who demonstrates that athletes who belong to individual sports and those who belong to the collective sports, have different personality traits. Knowing the psychological characteristics in relation to the type of sport, it is interesting to continue investigating more comprehensively the outcomes of the mixt profile that all managers present, both male and female.

### *Competitiveness*

The results of analyzing the variable competitiveness show that general population have a less competitive profile than managers who present profiles where competition and the combination of both competitive and non-competitive are more present than in general population. These findings are in accordance with Allen & Laborde (2014) who postulate that athletes competing in national or international competitions report higher levels of conscientiousness and lower levels of neuroticism. These personality traits are related with athletic success but also are observed in other performance context as occupational success. Also, it is seen that the competitive profile is transformed into a

combined profile progressively. It is an expected result because competition is mostly linked to younger stages of life. Participants may abandon competition but continue practicing sport.

The combined profile is the most frequent in men, being even more frequent in the manager sample. In the other hand, non-competitive profile is the predominant one in the general population women, whereas in women manager the three profiles are equaled. These results are in accordance to Warner & Dixon (2015), who revealed that women and men tend to view and interpret competition differently. They also have different physiological, psychological and social reactions to it, which strongly impact their sport experiences. During the last decades, boys and girls were socialized differently into sport, this impacts how they view competition, and the centrality of competition to their sport experience (Dixon, 2008) These facts lead to find more competitive sport practice in men than in women.

## Conclusions

As is known, this is the first study to identify sport trajectories in a sample of adults comparing managers with general population across lifespan. Starting from the evidence that physical activity contributes to personality change (Allen, & Laborde, 2014), this study answers the call of the authors Murphy & Johnson (2011) to explore the lifespan approach in leadership development in a variety of ways conceptualizing physical activity and sports involvement as a dynamic behavioral process.

Despite the positive findings around the different trajectories in managers and general population it is not possible to confirm if sport practice and physical activity can impact on leader development as it is suggested, so it will require more research to explore this approach. Also, studies incorporating qualitative analyses and mixed methodologies will gain a clearer understanding of this topic of interest.

In sum, the present study represents an important first step toward a new perspective of leadership development, in which the sport trajectory of a person and the sport experience and context lived around the sport can impact on the development of certain skills that could have a direct

or indirect effect towards leadership development. More research around this line of investigation could be useful in human resources recruitment.

### Limitations

This study presents several limitations that need to be taken into consideration. The results presented above may be different in future analysis generations as the current participants were people from all ages. Consequently, the sport trajectory of a 70 years old person is probably more consolidated than the one from a 25 years old person, that it will evolve during the following years. This offers an interesting opportunity to repeat the study every 5-10 years to study the evolution of the sports trajectories. In addition, the small manager sample provides limitations in comparison with the other samples and difficult the generalization of the findings. Finally, demographic factors such as level of studies or socio-economic status, were not taken into account and could help to understand some results.



## **CAPÍTOL 6. STUDY III: LEADER DEVELOPMENT ACROSS THE LIFESPAN THROUGH SPORT AND PHYSICAL ACTIVITY**

“We have barely scratched the surface in our efforts toward leadership development. In the mid-twenty-first century, people will look back on our present practices as primitive.” John Gardner  
(1990, p.15)





## Introduction

Organizations are working hard to find leaders who can adapt to changes and provide the necessary answer by implementing all kind of leadership development programs. Evidence of this are the results of the survey administrated to 2,500 business and Human Resources leaders in 94 countries of which 86% of the respondents rated as urgent the intensification of leader development (O'Leonard & Krider, 2014). During the last years, business leaders have manifested an increasing interest in learning from the sport sector, proof of this are the increasing number of athletes and coaches who participate in leadership programs offering their insights and experience transferable to business (Gordon, 2007; Gould & Voelker 2010; Frawley *et al.*, 2018 & Jones, 2002, 2008). Consequently, the research around the lessons transferable from sport to business has reached more interest. (Burnes & O'Donnell, 2011; Frawley *et al.*, 2018; Jalonen *et al.*, 2018; Ryan & Dickson, 2016; Seppänen, 2020; Thornton & Etxebarria, 2021; Trapp, 2014; Vilhelmsdottir *et al.*, 2016 & Wallenberg, 2021)

Sport has proved to be a topic of interest in the business organizational field for a long time (Wolfe *et al.*, 2005) and the studies relating leadership and sport have grown remarkably as we have been mentioning, but there has been limited research undertaken on leadership development through the sport trajectory from a lifespan perspective. This study adopts the experience-based leadership development framework (McCall, 2004), within the Lifespan developmental psychology (Baltes *et al.*, 1980) to explore how the sport trajectory impact on leadership development.

## Literature review

The experience-based leadership development framework and the Lifespan developmental psychology have been broadly studied but this study is focused on the integration of these perspectives in the sport field.

### *Experience-Based Leadership Development*

The experience-based leadership development framework suggests that experiences rather than programs play an important role in leadership development (McCall, 2004). The author highlights seven conclusions that have been investigated over the past few decades about the contribution of experience in leadership development (McCall, 2010).

The first conclusion postulates that leadership is learnt from experience. But learning doesn't happen automatically and experiences don't automatically improve leader development (DeRue & Wellman, 2009), is a complex process because it needs awareness of learning, predisposition to learn and some other ambiguous aspects as knowing when the learning has occurred (Day, 2010) The second conclusion is based in the fact that some experiences influence more than others, finding that early work experiences, short-term assignments, major line assignments, positive and negative superiors, hardships of various kinds and some miscellaneous events like training programs are the most reported in successful managers over the last decades. Despite these findings, Murphy & Johnson (2011) adds that a framework of leader development that describes what is learned before adulthood, in terms of influences and impact factors, can improve the understanding of leadership and leader development.

The following assumption suggests that these events are influential learning experiences due to the challenge that they imply. Developmental challenges at work seem to be a trigger for developing leadership skills owing to the demand for creativity and problem-solving ability. (Liu et al., 2021) The consequences of these challenges facilitate the development of strategic, cognitive and behavioral leadership skills (Day et al., 2009 & DeRue & Wellman, 2009). Leadership identity is an essential requirement for leadership development to occur (Day et al., 2009). The assumption number four postulates that different types of experiences teach different lessons depending on each person's background. In this sense, some authors (Murphy & Johnson, 2011 & Liu et al., 2021) propose some leadership developmental models to show how different experiences can influence the individual in each stage of the lifespan.

The fifth conclusion propose that jobs and assignments can be more developmentally enhanced by adding to the challenge coaching and high-quality feedback cycles to the learning process (Bransford & Schwartz, 2009), they require deliberate practice for behavioral reinforcement, which sometimes it's difficult to find in some organizations (Day, 2010). The following assumption is based on the idea that everybody can get the experiences they need despite of the personal and professional circumstances. Many relevant events occur during childhood and adolescence or they are a consequence of personal relationships but there is still a margin of opportunity to obtain the experience they need to succeed. Research has demonstrated that there are personal factors that influence an individual's ability or willingness to learn from experience (Day, 2010), reason why McCall (2010) suggests that the key is matching the developmental needs with the correct experiences.

Finally, the last conclusion suggests that learning is a complex and dynamic process that takes place over time and it has to be embraced to be successful. Individuals have opportunities to work on their leader development at each developmental stage and everyone has the potential to develop leader skills, understanding development leadership as a process that takes place during all lifespan that involves multiple experiences, situations and context (Liu et al., 2021). In summary, an experience-based approach represents a thorough way of developing leaders because it clusters life experience, professional experience and specific skill development, stimulating reflection and openness towards a continuous learning experience (Thomas, 2008).

### *Lifespan Developmental Psychology*

The Lifespan developmental Psychology (LP), is an orientation that concerns with the description, explanation, and modification of developmental processes in the human life from conception to death (Baltes *et al.*, 1980). This perspective is based on the assumption that each period of life has its own challenges and developmental successes. It is about comparing the development of an individual with that of others and with the person's own state at different times (Baltes *et al.*, 1999). This approach is governed by 4 assumptions: Development as a long-life process, development as

expression of ontogenetic and evolutionary principles, pluralistic conceptions of development and lifespan developmental psychology as integrative framework (Baltes *et al.*,1980). At the theoretical level, this approach is valid since there are certain aspects of human development that do not make sense if they are not explained through this approach (Baltes *et al.*,1980). Some of the axis of knowledge through this approach are identification and analysis of the inter-individual differences in intra-individual change and the analysis of interrelationships in behavioral change (Baltes & Nesselroade, 1979, Day, 2011), themes that are both contemplated in this research.

Although leadership development in the adult stage has been extensively studied over the decades, it has not been until recently that it has been explored on a long-term level as a process that takes place throughout the entire life beginning in childhood to understand the developmental trajectories of individuals through their lifespan (Day *et al.*, 2009 & Day, 2011). The authors Avolio & Gibbons (1988) are one of the forerunners in the study of leadership development from a Lifespan perspective but their line of research didn't have much continuity until the last decade.

After exploring the literature related with youth leader development and finding an important research gap on the study of leader development before college, Murphy & Johnson (2011) proposed a model of leadership development across the lifespan. The proposed model is an attempt to schematically capture the dynamic and iterative process associated with the development of leadership. The model starts with early developmental factors that include early influences (genetics, temperament and gender), parenting styles and early learning experiences (education, sports, and other practices that includes leadership roles). As it will be explained later this study is particularly interested in the sports as a learning experience. The second box refers to the dynamic development process based on two concepts: leader identity and self-regulation. The third box includes the outcomes of engagement in future leadership development and leadership effectiveness. It has to be noted that the context (developmental stages, societal expectations, time and history) has an influence in all three sections.

Building on this previous work, Liu *et al.*, (2021) proposed a new model that clarifies the dynamic nature of development and the underlying mediating systems that enhance learning experience leader development (McCall, 2010) across the lifespan. This model describes a set of developmental experiences and useful skills for leadership at each stage (6) across the entire life. The aspects more relevant from this model to this study are the proposed developmental experiences centered in play (Preschool), cooperative learning experiences (Childhood) and extra-curricular activities (Adolescence) which include sports or physical activity in all cases.

Parallely, as it is detailed in the research carried out by the authors Riera & Moragas (2021), Lifespan Developmental Psychology approach has been adopted by a wide range of researchers to study the role of physical activity and sports in human development at different stages throughout people's lifespans. Investigations showed that even, nowadays the exploration focusing on adulthood and old age has increased, childhood and adolescence are the most studied due to the assumption that earlier age periods are precursors for or contributors to later periods of development (Malina, 1996). This contribution is explained through different studies that have demonstrated that in these early stages of development is where the most significant changes are occurring at the motor, cognitive and emotional level (Fischer, 1980 & Gardner, 2011).

Despite the importance of keeping in mind all lived experiences taking place at any stage of the life and the learning obtained of them (McCall, 2010), childhood and adolescence represent a sensitive period where all the lived experiences can influence more significantly the identity construction of an individual (McAdams & Zapata-Gietl, 2015) and, therefore, these early experiences contribute to create the foundation for future leadership development to build on (Murphy & Johnson, 2011).

### *Leadership development and sport*

As it is suggested in the studies mentioned above, participation in some organized activities, like sports during childhood and adolescence (Murphy & Johnson, 2011 & Liu *et al.*, 2021) may

influence the development of the leader and predict behaviours in adulthood (Howie, 2016). More precisely, Murphy & Johnson (2011) suggests that even many of the lessons necessary for effective leadership are learned from organized sports the key element is knowing the specific outcomes associated with youth sports that transfer to leadership.

From this question, numerous studies have been carried out to build more knowledge around this matter. Wright and Coté (2003), explored the activities that leader athletes engaged from an early age and found that there are four central components in the leadership development in sports: high skill, strong work ethic, enriched cognitive sport knowledge, and good rapport with people. More specifically, Larson *et al.*, (2006) found that children who participated in sports programs showed higher rates of initiative, emotional regulation and teamwork experiences compared to other types of organized activities. Murphy & Johnson (2011) highlight some other skills that complemented those mentioned: visioning, intellectualizing, cultivating self-efficacy, focus on winning, being self-interested, being competitive, being task and ego-oriented, and cultivating and enjoying the flow experience.

The research carried out by Burnes & O'Donnell (2011) showed that it exists common areas (characteristics, capabilities, contexts and challenges of leadership) between business leaders and sport leaders. Also, that there are areas where sporting leaders show better results developing their skills and aptitudes as the ability to welcome and bring about change. And, that indeed, business can learn from sport some competencies as interpersonal relationships, communication or the holistic view of ideal performance state. These findings have given rise to a new line of research based on the influence of sport on leadership (Frawley *et al.*, 2018; Jalonen *et al.*, 2018; Ryan & Dickson, 2016; Seppänen, 2020; Thornton & Etxebarria, 2021; Trapp, 2014; Vilhelmsdottir *et al.*, 2016 & Wallenberg, 2021).

Some of these studies are focused on the comparison of sport leaders and sport managers, either in terms of leadership styles (Wallenberg, 2021 & Van Dalfsen *et al.*, 2020) or the comparison between team structures and group dynamics (Vilhelmsdottir *et al.*, 2016). There is also, a growing

interest from the gender perspective that focus on the development of women leadership based on their participation in organized sports, (Thornton & Etxebarria, 2021 & Trapp, 2014) or that analyses leader women athletes to explore differences and similarities between men leaders and women leaders (Hood, 2015 & Wright & Coté, 2003).

Despite all the literature, significant work is still required to enhance the understanding of leadership development experiences within the sport field. This study aims to contribute to the research of leadership development through sport by investigating the sport trajectory during a lifespan with a specific focus on experience-based leadership development.

## Design

### *Method*

A qualitative design was carried out with the purpose of examining if sport practice could be an impact factor in leader development. Data were gathered using semi-structured interviews.

### *Context*

Considering the findings of previous studies (Riera & Moragas, 2021 & Riera *et al.*, 2022), it was created sport profiles in order to select a sample of managers from the more common sport profiles in the managers' sample. To create these sport profiles, it was followed the same procedure as the mentioned studies (Riera & Moragas, 2021 & *et al.*, 2022), that includes the selection and codification of three variables based on the influence to the development of an individual during the lifetime. The first variable refers to the regularity of practice in sport and Physical Activity (PA) in each stage (1, Yes, if they have practiced during all stage; 2, No, if they didn't practice sports or PA during all stage). The second variable analyzed relates to the kind of sport or PA that was practiced (1, Individual, if they have practiced individual sports during the stage; 2, Collective, when it was practiced collective sports during all stage; 3, Mixt, when it was practiced both individual and collective sports). Finally, the third variable measures the presence or absence of the component competition in the

sport practice (1, Competition, when the sport practiced was competitive during all stage; 2, No competition, if the sport of PA wasn't competitive during all stage; 3, Combined, when it was practiced both of them).

Each variable was coded taking into account all the development stages of the Sport Trajectory Questionnaire (STQ) to finally create final profiles of each variable based on the mode and the relevance of the first and second stage of the development (Liu *et al.*, (020) corresponding to childhood and adolescence.

**Table 16**

*Managers' sport profiles*

Regularity of practice	Kind of sport	Competitiveness	Number of managers
Constant	Individual	Competitive	3
Constant	Individual	Non-competitive	6
Constant	Individual	Combined	7
<i>Constant</i>	<i>Collective</i>	<i>Competitive</i>	<i>17</i>
Constant	Collective	Non-competitive	0
Constant	Collective	Combined	6
Constant	Mixt	Competitive	7
Constant	Mixt	Non-competitive	3
<i>Constant</i>	<i>Mixt</i>	<i>Combined</i>	<i>24</i>
Non-constant	Individual	Competitive	1
Non-constant	Individual	Non-competitive	6
Non-constant	Individual	Combined	1
Non-constant	Collective	Competitive	1
Non-constant	Collective	Non-competitive	0
Non-constant	Collective	Combined	1
Non-constant	Mixt	Competitive	0
Non-constant	Mixt	Non-competitive	1
Non-constant	Mixt	Combined	2
			86

The results from this codification, showed that 2 profiles out of 18 were more present in the sample of 86 managers (Table 16). Taking into account these results, it was conducted a purposive



sampling approach to explore deeper insights of how the sport trajectory may affect the development of leadership.

### *Participants*

A total of 17 managers (5 women and 12 men) aged 31 to 62 (Me 42,4 & s 9) were selected based on their sport profile from a larger sample from a previous study (Riera *et al.*, 2022). The sample composed by 86 managers (23 women and 63 men), completed the STQ (Riera & Moragas, 2021) about their sport trajectory over a lifespan with the purpose to analyse the sport trajectory of the managers compared with general population to find common patterns. From those 86 managers, a purposive sampling was conducted in order to ensure the representation of managers with different characteristics (gender, age, professional sector and number of direct employees) within the sport profiles more common in the managers' sample.

The sample include participants from the two most common profiles in managers, 59% corresponding to a constant, combine and mixt sport profile (practitioners who participated in individual, collective, competitive and non-competitive sports during all their lifespan) and 41% corresponding to a constant, collective, competitive sport profile (practitioners who participated in collective and competitive during all their lifespan). From these profiles, there were selected seventeen top managers (age 31 to 62) from both gender (5 women and 12 men), different professional sector (sport sector and non-sport sector) and different number of employees (from 5 to 250). (Table 17)

**Table 17***Sample's characteristics*

<b>Sport profile: Constant Collective Competitive</b>						
Nº	Code	Gender	Year of birth	Professional sector	Professional position	Nº of employees
1	2	Women	1989	Sports	Area manager	60
2	3	Men	1980	Sports	Head of sport facilities	38
3	41	Men	1967	Non-sports	Iberia Sales manager	9
4	47	Women	1981	Sports	Head of law department	5
5	59	Men	1969	Sports	General manager	100
6	168	Women	1989	Sports	Head of sport facilities	8
7	358	Men	1971	Non-sports	CEO and owner	250
<b>Sport profile: Constant Mixt Combined</b>						
Nº	Code	Gender	Year of birth	of Professional sector	Professional position	Nº of employees
8	7	Men	1988	Non-sports	CEO	6
9	15	Men	1984	Non-sports	CEO	86
10	18	Men	1989	Sports	Area manager	100
11	25	Men	1960	Non-sports	Head of finance	20
12	34	Men	1971	Sports	CEO	9
13	39	Men	1976	Non-sports	General Manager	16
14	49	Women	1974	Sports	Head of sport facilities	52
15	51	Men	1968	Sports	Managing director	52
16	129	Men	1982	Non-sports	Head of team management	11
17	355	Women	1983	Sports	Head of projects	6

**Procedure**

Once the sampling was selected, all seventeen managers were contacted by e-mail, which contained a full description of the research, to participate voluntarily in an interview. It was given the

choice to participate face-to-face or by video-conference due to the covid restrictions. All interviews were scheduled in accordance to their availability and needs and had a duration of 35-40 minutes approximately. It is important to mention that the level of manager position of participants did not allow the interviewer to extend the conversations because of lack of time. The interviews were conducted using a semi-structured interview guide designed from the approach of direct interview (Kvale, 2008). The questions were divided into three main sections: a set of questions regarding the sport trajectory, a set of questions regarding their professional trajectory and a set of questions regarding the transference from their sport trajectory to their leadership. According to the essential characteristics of the qualitative interviews proposed by Rogers & Bouey (2005), the beginning and the end of the interview were not clearly predetermined to adapt each question to the circumstances of each manager to fill the gap between the interviewer and the interviewee (Musselwhite *et al.*, 2006). In order to facilitate data analysis, all interviews were recorded, most part of them by video and there were literally transcribed.

### *Data Analysis*

The process of analyzing qualitative data implies minimizing the complexity of raw data to statements that can be coded and analyzed. This study adopted the procedure of conventional content analysis of Hsieh and Shannon (2005) that consist in a process of six steps. First, it was read all data repeatedly to obtain a sense of the whole content of the interview. Then, data was read word by word to capture key thoughts or concepts. In the third step, each phrase was labeled with a code indicating the meaning of the phrase until data saturation. A total of 19 codes were labeled. After that, the codes were sorted into 5 categories (Sport trajectory, professional trajectory, personal history, sport qualities and sport transfers). Then, it was conducted an inter-code reliability where two researchers independently coded a sample of transcriptions. Finally, it was produced the report of the findings. All data was analyzed with the program Open Code (4.03).

## Findings

The findings of this study revealed that the interviewed managers perceived that their sport trajectory has had an important influence in the development of their leadership. This influence is determined by four factors: (1) sport profile, (2) sport referents, (3) competences, values and abilities and (4) experiences from different sport roles played during their lifespan. As participant number 9 conclude:

*It's not just a matter of playing sports that contribute to the development of leadership by the mere fact of playing sports, but everything that sports practice entails: success and failure management, coexistence with coaches, teammates, sport clubs, joys, passion, frustration...is everything. I don't know, I even would say that sport practice is a good business school because at the end almost everything I've learn in the field I can transfer it to my company.*

### Sport profile

The sport profile, understood as the way the sport was practiced during the lifespan (kind of sport, competitiveness and constancy), it has been found to play a significant role in the development of the managers.

Participants found that the kind of sport practiced during their life impacted the way they managed due to the different competences that individual or collective sports contribute to develop. Fifteen out of seventeen managers defined themselves as a collective profile regardless of whether they play individual or collective sports, due to the justification that individual “sports are trained together with a team”, as participant 14 and 16 mentioned, or even competing, as explained by participant 6:

*I would say... I have a collective profile, but for a reason. When I practice individual sports, like a race, I like to share it, at the same time as the race, with other people who are also running. I mean, there is a help with the other one that I like.*

Even the interviewed managers don't define individual sports as an individual practice because there are more people involved "...I have developed group awareness... you train with a lot of people..." (Participant 5), the learning perception transferable to leadership from individuals or collective seems to be different. The practice of individual sports entails more awareness, responsibility and ability to make decisions "if you fail, you are the one that fail, you go all with it and you assume the consequences of the failure....in team sports sometimes you don't take the decisions or the right decisions because you are afraid to fail the team" (Participant 8) However, the practice of team sports contributes to develop the ability to delegate and, maybe, to socialize easier. "As a group it's much easier and a lot more fun than doing it yourself. You go much further than if you want to do everything yourself...simply because you don't know how to delegate" (Participant 5). In this line, participant 15 highlight:

*In collective sports it's clear the development of teamwork...but in individual sports, it is more relevant the constancy of the beginning, clear goals... You will fall 149 times and at the 150 it will be ok.....and with work it is the same...you have goals or you have a project to run or you have a budget to meet and you have to figure out how to achieve those goals.*

These differences between the leadership skills developed through individual or collective sports is far developed by participant 10:

*One of the things that tennis gives you, in that sense, is the fact that you have to deal with situations on your own. You are the only one competing and you are the one who has to solve the problems. Tennis teaches you this: a lot of autonomy when it comes to solving problems. You have to go forward by yourself and have the ability to know what decision to make and how to act in any adverse situation. At the level of team sports, football, for example, teaches you about camaraderie, knowing how to understand your teammate, how to add between the two, know the skills that each has and how to enhance them. But,*

*at the end, either what individual or collective sports teaches you can be transferred to a team of people.*

Regarding the variable competitiveness, it was found that 16 out of 17 managers define themselves as a competitive person, not only in sports but also in other aspects of their life as work or even with themselves. This competitiveness it seems to be an element transferred directly from the sport practice. It is not only about “that spark that I love” (Participant 6) but also the learned capacity of “knowing when to compete” (Participant 13) and the challenge it represents as it was explained by participant 1 “The competitiveness of setting goals and wanting to achieve them as best you can. That consistency of work to achieve my goals may have it taken out of basketball” and participant 6 “I really like challenges” I have a competitive edge in me that I like, in essence. This is my life”. But even competitiveness is perceived as a good competence for all of them, participant 5 points out:

*The competitiveness it's transferred from the sports field to the business. We would say that it could even go – it's not the same, there are some differences – with the issue of demand in terms of excellence. These are things that can go almost parallel.... depending on whether you exceed that competitiveness threshold, you can win a medal for being the most competitive guy in the world, but you're not helping the project.*

Despite the differences found in the perceived influence of how competitiveness and the kind of sports impact on the development of leadership skills, all managers share a unanimous vision regarding the perseverance in sports practice even one of them was not actually active. All managers share the opinion that the practice of sports played and plays an important role in their lives although “it's difficult to reconcile sport with work, family and personal life” (Participant 16) but the most part of them organize their schedules to fit it in. “I try to make it within my priorities...if you organize yourself, you will find place for it” (Participant 3). This strong perception of sports need is explained

as a consequence of the meaning of what this sport practice represents for them. For some of them, currently, it's an "escape route to de-stress" to work properly (Participant 12). "I need to have those moments... it's mental...some people we need to go up our heart rate so that I can oxygenate my brain and that's when I think most clearly" (Participant 14). But what's most interesting it's the significance that this sport perseverance during their lifespan has brought them, they define sports practice as part of them "Maybe it's because sports are already part of us... For me, it's basic" (Participant 6).

Participant 11 highlighted:

*I think it is a very important activity present during all my life. Just like other things I've done, I've stopped doing them; sport has always been with me, from a very young age, it has always been present. I think it has been an activity that has helped me to develop as a person, it has helped me to socialize, to develop, to learn, to develop an attitude that has helped me in other facets of my life.*

### *Sport referents*

The sport referents (coaches, teammates, parents...) were found to be significant to participants' development because the learning through these relationships contribute to offer a meaningful experience to develop some leadership skills. All managers reported that the initiation of their sport practice started thanks to some member of their family, either because there is a member who is a sports person "Sport has been always important to my family because my father was a swimmer and a football player during the republic, and this was not common" (Participant 11) or because some member of the family thought as a healthy way to develop during childhood and adolescence "I started doing waterpolo thank to my parents, because they thought that I was hyperactive and sport would be a good way to channel my energy" (Participant 7) Not only in terms of personal development but also in terms of social development as participant 14 explained:

*It was a way of choosing my environment to grow up with, and this would also condition the companies, my development and a little bit of everything. It was his job*

*to get me into the world of sports so that I could spend my free time playing sports and not doing other things.*

Whatever the reason, the implication of most parents in the sport experience of the interviewed managers was very active and it had influence in the attitude with which they participated in the sport “Always try to aspire to the maximum in everything you do, which is what my father taught me: if you do things, do them right. If not, don’t do them” (Participant 15) and the positive way they lived the sport “I enjoyed practicing motorcycle trials with my father and his friends and now I am trying to transfer this passion to my son” (Participant 9) Those experiences were influential to develop a certain attitude to face sport and other aspects of the life as it was reported by participant 6:

*I remember, for example, after a very good game, when we were back in the car, my dad would tell me what I failed at, what he hadn't liked about my attitude, what I could do to improve. Yes, they did congratulate me, but they told me what they need to get my feed on the ground. I didn't see it when I was a teenager, but I really appreciate it today because it taught me humility.*

Also, this example showed how the feed-back perceived after the sport practice contributes to the learning of the experience, even if it’s years after it. In this sense, it is important to analyse the lived experience with the sport coaches reported as referents. “Apart from transmitting some values about the team that shape me significantly, she helped me to grow. I will always be grateful to her” (Participant 6). In particular, the inter-personal competences that they remember is what most of them reproduce later in their job position. Participant 10 explained:

*The most influential coaches are the ones who had the most empathy with the players. Those who most understood the situations in which the players found themselves, those who accompanied them the most. Those who were most able to help you. These are the types of coaches that leave the most mark and the ones that influenced me the most in*



*how I manage certain situations nowadays. Each person has their own personal problems and their own adverse situations. That is why it is very important to know how to act in every moment, to know how to resolve any conflicts that may exist, to know how to accompany them, to make them feel important within an organization. This, is something that I saw in my coach and now I try to apply.*

Not all the memories reported about the referents were positive, 9 interviewed managers remembered to have had negative referents at some point of their lifespan. Either it was a positive or a negative referent, all of them were influential for their leadership development. Participant 5 remembered: "It comes to my mind a negative referent from when I was 17 years old that was too demanding with the players. He treated us as an object, if we had an injury, he would exclude us from the team" Most of the respondents who reported negative referents, also reported that the learning of how not to do things have more impact on their leadership development than the positive things. "Those things that have impacted me in a negative way, I keep them in mind to not repeat them, because to do so would be a failure. If I've seen something and experienced it in a bad way, I can't let myself to reproduce it" (Participant 6). This could be understood with the clarification offered by participant 14: "The thought of the way of how you don't want to do things it is easier to keep it in mind than the one of how you would like to do things, because it's stronger"

Most of the managers explained their memory about the referents analysing their leadership skills and their leadership style. "His attitude, his good vibe...He led by making us feel part of a group" (Participant 17). It's something that comes up naturally during most interviews, probably owing to the leadership knowledge that all of them have and the association that they reproduce from one field to the other. Participant 4 expressed:

*She was a referent due to the leadership, the intensity, the seriousness, the professionalism, the desire, the way of conveying things and the demand that they*

*conveyed to me. Also, the confidence she gave me. [...] She was demanding but then, you saw the reward of a job well done...the way she conveyed and communicated, the confidence...I remember thinking that I would like to be like her...*

### **Competences**

It was found that managers described numerous competences developed through the sport trajectory that they consider important in their job positions nowadays. All the competences have been categorized into three groups depending on the type of relationship that is established: strategic & performance competences, when the relationship is established with the organization; interpersonal competences, when the relationship is with others and emotional and attitudinal competences, when the relationship is established with oneself. Table 18 show the competences reported as influential from the sport trajectory to the leadership.

As it was shown in table 3, strategic and performance competences are the ones that were less reported by the managers. Goal achievement is the competence more mentioned by managers in this category as a consequence of the direct relation with the purpose of the sport, above all the competitive sport. Participant 9 expressed it this way: “The desire to achieve the goal and not to drag, not to sink if you have a defeat and move on until you reach the goals set. All this is what sport gives you, and it's very similar in the business world.” The acquisition of decision making was related to individual sports by various managers. “Tennis teaches you a lot of autonomy when it comes to make decisions” (Participant 10), strategic vision, instead was associated to collective sports as is explained by participant 1:

*The strategic and operational vision depends a lot on the experience that everyone has had with team sports. But within the company, when I try to make someone understand, it helps a lot. -Listen, when you were playing handball, you're doing this now, you're throwing ball, pass, ball, pass, ball; And now I need you to think, if an opponent puts you*

*here, what alternatives do you have? How would you approach the game differently? - It helps us a lot to talk internally, to put people in context.*

**Table 18**

*Influential competences from sport to leadership*

<b>Category</b>	<b>Dimension</b>	<b>Participants</b>
Strategic & performance Competences	Ability to adapt	7; 14;
	Decision Making	2; 9; 10;
	Goals achievement	1; 8; 9; 15; 16
	Resolving ability	3;
	Strategic vision	1; 12; 17
	Time organization	1;
Interpersonal competences	Active listening	2;
	Assertiveness	16
	Communication Skills	1; 17
	Conflict resolution	10;
	Empathy	3; 8; 9; 11; 13;17
	Patience	2;
	Demand (positive way)	4; 14
	Teamwork	3; 9; 10; 11; 13; 15; 16
Trust	7;	
Emotional & attitudinal competences	Commitment	7;
	Constancy	5; 8; 9; 11; 14; 15
	Humility	4; 6; 15
	Effort	3; 5; 6; 7; 12
	Emotion's control	3; 8;
	Passion	5; 6
	Perseverance	7; 8; 9; 12; 15
	Resilience	11
	Responsibility	1; 4; 10
	Self-demand	4; 14
Self-steem	6; 7;	
Stress management	16	

The second category referred to all the competences needed to relate to others, contains two of the most mentioned competences: teamwork and empathy. Findings show that every time a

participant talked about teamwork it also talked about another interpersonal competence related with it as for example empathy, communication or listening ability. Participant 13 expressed:

*Teamwork is vital, you have to be empathetic, to know how to relate to others and to know how to do teamwork, otherwise it makes no sense... you have to be able to unify criteria, be empathetic, listen, work as a team, do things as broadly as possible, and even though the final decision is yours, you have to make it participatory for everyone. The moment you have someone who doesn't feel part of your team or business, you have a problem.*

Emotional & attitudinal competences were the most mentioned by the respondents owing to the meaning of sport. Sport is passionate and everything about it involves emotions. Passion was reported by the respondents as something they learned from the sport practice and they try to pass on to their teams in their workplace. Participant 6 explained:

*Sport has taught me to be passionate about work. This is the lost battle of this world. You don't go to work because that's what's it's about, you go to work because you feel it and you love it. You play football or you run because you love it. Well, at work, you have to do the same, because otherwise there are many other jobs, look for another place and be happy.*

This passion that encourages the development of a certain attitude towards the different sport situations it is transferred to business. Commitment, perseverance, resilience, constancy, sacrifice, effort...all these attitudinal competences are the fruit of the passion and important as leadership skills developed through sport. One aspect that was mentioned numerous times, is the ability to persist even there is a defeat. "Knowing how to lose, you know?" (Participant 7). The results showed that sports imply losing more times than winning for most part of the practitioners, and so this fact develops humility and the ability to persist. Participant 1 expressed:

*Practicing sports, you practice losing. But it is a game, because in the end, sport is still a game. And practicing losing ... Then, in professional life, which is no longer about playing but about being serious, because there are very important commitments, if you have already practiced losing and getting up, you already know how to do it.*

### *Experiences from the sport roles played during a lifespan*

The last factor refers to the learnings obtained thanks to the roles played in sports during the formative stage. Either as a team captain or as a coach or some small job position within the sports club. The results showed that, from all the managers who played team sports as the main sport, none of them reported being captain of their team and just one of the mixt profiles. Those findings could be explained through the arguments given by participant 12:

*This concept of leadership that the captain has an important role to play to lead the team as it happens in other countries, it doesn't exist here. In Catalan sport clubs, the captain of a team usually is the member of the team that has been more time on the team, so that doesn't mean he is qualified to lead the team or that he is captain due to his leadership skills, it's just not relevant being captain here.*

Despite the position of captain was not relevant for the interviewed due the meaning of this role in Catalan sport, it was found that most of them, remembered to have been played an important leadership role in their team. These leadership within the team is determined by different aspects that can be clustered in two groups: specific knowledge of the sport and human skills. One example of the first group is explained by participant 1: "When you have been playing for ten years, you have developed a maturity in the sport that puts you on a position of leadership in the team, also responsibility, and I think, that I've taken all this to the way I lead in the company". A clear example of the second group is explained by participant 6:

*I had a role in the team that I consider important because I fostered the team relationship by creating a good atmosphere or uniting the team with outings...something that nowadays I keep trying to apply with my work team.*

Comparatively, respondents expressed a similar view about the importance of being a coach during their adolescence and young adulthood and its impact on the development of certain leadership skills. "It's a way of learning by trial and error, when you are 18 you don't communicate as you do when you are 30, you learn, so in my case it really helped me to develop some leadership skills" (Participant 1) This notion of being in a constant learning process accelerates the acquisitions of some leadership skills that probably, they would not have been acquired until they reached the working life. Participant 8 expressed: "Being a coach at a young age it demands a premature growth of your personality, it demands to be responsible of other persons, to develop communicative abilities..." At this sense, participant 11 concludes "If you practice a sport actively and then you become a coach, you are always learning".

It was found, most of the managers had a busy agenda when they were young combining personal life with sport practice, studies and also coaching. This fact, contributed to development of certain skills linked to organizational management and people management as participant 17 explained "When you are studying and you have to coach or coordinate a summer camp at the same time, you have to be able to organize yourself properly to do everything the best way" (Participant 12) Participant 14 added:

*When you are a representative of a group, the empathy, for example, is very present because you have to listen everyone, you have to convey the ideas of everyone and not just yours, and all these competences then has a transfer to exercise leadership in the workplace.*

Furthermore, all managers agreed that coaching not only had an influence on the development of leadership skills but also, in the perception of how people looked at them. “...they may see you as more responsible and capable of holding positions of responsibility in the future” (Participant 8). Results showed that the perception of the respondents is that general population more easily presuppose leadership skills in young adults when they are coaches or work in the sports club in some coordinating position than when they don’t. In this sense, participant 2 reported:

*People perceived that I was a person who had played in a certain category, and in Vallirana, they were not used to it and what they valued was this and the knowledge it gave them. Because apart from being a coordinator, I was the coach of one group, and I was a reference for them as a coach.*

In terms of employment, all managers indistinctly from the sector affirmed to take into account the sports career when hiring people. However, only the managers of the sports sector stated that the sports career was a determining factor. Participant 9 explained:

*I’m the one who hires most of the people in the group... if I end up interviewing these people I ask them, not their whole career, but what sports they play.... when you interview someone who practices sports that you know well, in my case mountain sports, you always see it with better eyes, because you think that a lot of people who practice these sports, has a set of common features that sometimes are what you are looking for. In the case of climbing, I find it a discipline that teaches you many things that can be applied to other parts of life. For example, to assess the risks. When you are climbing you have to assess each step, whether there is a lot of risk or not, and this in business it’s basic.*

This statement, is a clear example of the results found, showing that 8 out of 17 managers declared that outdoors sports (sea or mountain) have more impact in the development of certain leadership abilities as decision making, risk calculation or stress and emotions control. “This is where

the difference lies. It is an additional risk that is not present in the other sports, and this decision-making is made about life-threatening. This impacts and influence even more” In this sense, participant 15 highlighted:

*On conventional sports everything is very regulated and you know what the playing field is. And instead, all these others (outdoor sports) have many more variants and many more surprises. And that makes the stress level even more beastly. Because on a tennis court, a football field, a basketball court, a hockey rink or a golf course, you won't be surprised. .... On the other hand, outdoors sports have an added bonus. The humility I told you about the sport gives you, it is even more present when you practice these sports.*

To end this part of the results, it was considered relevant the findings around the experiences abroad. The results show that 12 out of 17 managers had an experience travelling worldwide before becoming the managers that nowadays are. Some of them travelled during their adolescences and young adulthood because of the sport competitions and others lived abroad starting their professional career or expanding their CV.

Finally, to summarize the findings of this study it was found that 15 out of 17 managers found that the sport trajectory lived during a lifespan influenced not only the acquisition of leadership skills and competences but also, their leadership style as expressed participant 5 “In the end, there are many transfers between sports and business”. This influence is more detailed by participant 10:

*Sport has given me a lot of things that I am using right now in my day-to-day life. Sport teaches you what life is all about, it teaches you to cry, to laugh, how to treat people, who to help and who not. The microclimate that is created in a football team is very similar to the one that can exist in a company, saving the differences (because it is one thing to play football and another to work). In business, people also work with passion and the coexistences are similar. Sport teaches you that people are sometimes sad, that everyone has their problems, that you don't always win and you often lose. And that you have to try*



*to overcome day by day and try to solve everything that has not just come out. And that's what sport teaches you, of course.*

## Discussion

The main purpose of this study was to explore if the sports trajectory can be an influential factor in the development of leadership and if so, how does influence it. This research has found some key findings related with the lived experience of participating in sports across the lifespan. These findings are now discussed in reference to recent literature on leadership development research, particularly, the experienced-based leadership development (McCall, 2004) within the framework of the Lifespan Developmental Psychology (Baltes, *et al.*, 1980 & Baltes *et al.*, 1999).

Taking as a frame of reference the principles of McCall (2010), this research could confirm the first one, which postulates that leadership is learned from experience. In this case, the sport practiced across the lifespan offers a unique learning experience for developing leadership. This affirmation is in accordance to the results of some studies (Howie, 2016; Liu *et al.*, 2021; Murphy & Johnson, 2011; Trapp, 2014) in which was concluded that the experiences that one has in athletics can affect one's development into a leader. The second principle of McCall's (2010) development model affirms that some experiences influence more than others. This research has found that managers affirmed to have learned more competences after being coach of some sport team during adolescence and young adulthood than being a captain of a team during childhood, adolescence or young adulthood. This finding is in accordance with the leadership development model of Liu *et al.*, (2021) which propose that extra-curricular activities such as sports are an important medium through which adolescents can gain leadership skills. And also, that leading activities as running a club or in this case, leading a term (in terms of coaching) provide opportunities for young adults to exhibit leadership skills. Many cultures emphasize the importance of being a sports captain to develop leadership skills, contrary to this believe, the results found that being a sports captain is not too relevant to develop leadership skills in Catalunya, Spain. This finding could be explained with model of Murphy & Johnson (2011) in which

contextual factors impact the extent to which those experiences result in greater growth of the leader development. Contrary to Burnes & O'Donnell (2011) who conclude that the ability to welcome and bring about change are the core competencies developed as a coach, the findings of this research suggested that interpersonal competencies as active listening, empathy or communication skills are the ones more mentioned by the managers. Despite the differences, results show that playing different roles in sports contributes significantly to the development of leadership skills. These activities provide scenarios in which adolescents and young adults can utilize leadership-related skills in real-world situations and thus develop their leadership potential (Murphy & Johnson, 2011).

Principle number three (McCall, 2010) outlined the importance of the challenge element for learning to occur. The results presented above, showed how managers expressed the importance of the competition as an element in their sport trajectory and later in their work life. The importance of the challenge that motivates them to make efforts and persist even if there is a failure again and again. These results are in accordance with some studies (Vielhelmsdottir *et al.*, 2016 & Wallenberg, 2021) who demonstrated that transformative leadership generates greater impact from sports leaders than from managers due to some aspects as motivation. Overcoming challenges and converting them into opportunities have a positive impact on the development of behavioural, cognitive and strategic leadership skills as problem solving (Day *et al.*, 2009; DeRue & Wellman, 2009 & Thornton & Etxebarria, 2021). These three categories match partially the ones presented in this study, which behavioural leadership skills correspond to emotional & attitudinal competences and also interpersonal competences, and strategic leadership skills correspond to strategic & performance competence. Contrary to the authors, it wasn't categorized any cognitive leadership skills.

The fourth conclusion (McCall, 2010) highlight the value of living different types of experiences to learn different lessons from each one. In this sense, this study has found that nearly 50% of the managers who answered the STQ questionnaire had a constant mixt combined profile (30%) and a constant collective competitive profile (20%). This finding is relevant for several reasons: On the one hand, because of 18 possible sport profiles, 50% of the managers belong to the same two,

and the rest is distributed among the other 16 profiles. On the other hand, is relevant owing to the impact that have the results found regarding the different competencies learned from different sport profiles in terms of individual or collective sports and the presence of the competition element. These findings are in accordance to the results presented by Riera et al., (2022) in which the variable kind of sports was analyzed to explore the different outcomes that offers the individual sport practice versus team sport practice in terms of leadership skills development.

The fifth principle (McCall, 2010) highlights the importance of feed-back in the learning process. The results of this study showed that managers stressed the importance of receiving feed-back from their positive referents, either by their coaches, parents or peers. These findings are in accordance to Wright and Coté (2003) who found that receiving feedback, acknowledgement, support, cognitive engagement, mature conversations with adults are important social influences that can play an instrumental role in the formation of some leadership skills. Contrary to Murphy & Johnson (2011) who affirms that incompetent coaches could interfere with the potential leadership development, this research has found that negative referents, among them bad coaches, teach how not to lead so these bad experiences help to develop critical analysis and the conviction and certainty of how not to lead. Principle number 6 of McCall's (2010) model states that even many influential events occur during childhood and adolescence, everybody can get the experiences they need to succeed. The findings presented cannot provide any element that verifies or ratifies this statement in relation to sport as an influential element in the development of leadership. Even so, results confirm that the stages more reported as influential by the managers in terms of sport were childhood, adolescence and young adulthood.

The last principle of McCall's (2010) theory, based in the idea that leadership development is a process that takes place during all lifespan is confirmed in the results of this study in which managers reported that their sport trajectory from childhood to adulthood influenced their leadership development. Contrary with the affirmation that participating in sports could either enhance or hurt leader development (Murphy & Johnson, 2011) this research has found that the sport trajectory

influences the development of leadership skills. The diversity in sports practice, whether it is the type of sport, competitiveness, sports references or the roles represented, favors the development of leadership skills.

Finally, the findings of this research are in accordance to Burnes & O'Donnell (2011) who found that business can learn from sport some competencies as interpersonal relationships and the view of what it takes to achieve an ideal performance state. Even in this study it was not specifically mentioned the expression of the ideal performance state, it was mentioned other abilities as effort, perseverance, constancy that are closely related with the concept. In this sense, the results of Wright & Coté (2003), indicated that leadership development in sport focused on developing four central components: high skill, strong work ethic, enriched cognitive sport knowledge, and good rapport with people which match with the interpersonal relationships presented in the study. As it was said by Wolfe *et al.*, (2005) and explained by one of the managers during the study: "Sport can be viewed as a microcosm of the larger society".

## Conclusions

During the last decades, sport has been recognized as of paramount importance for the development of individuals across the lifespan (Murphy & Johnson, 2011). Despite the increased literature focus on the transfer between sport and business (Burnes & O'Donnell, 2011; Frawley *et al.*, 2018; Jalonon *et al.*, 2018; Ryan & Dickson, 2016; Seppänen, 2020; Thornton & Etxebarria, 2021; Trapp, 2014; Vilhelmsdottir *et al.*, 2016 & Wallenberg, 2021) there were not found studies that focus on managers to analyze their sport trajectory.

This paper examined that research gap to explore if the sport trajectory influences the development of leadership skills, and if so, how does it influence by interviewing seventeen managers from different sectors. The results found that there is an influence and it is determined by four factors: (1) sport profile, (2) sport referents, (3) competences, values and abilities and (4) experiences from different sport roles played during their lifespan. The first factor presents data from the participants,

outlining the importance of the sport profile (kind of sport, competitiveness and constancy) in the influence on the leadership development. The second factor examines how positive and negative sport referents (coaches, parents, teammates...) influence the development of leadership skills. The third factor details all the competences listed by the interviewed as the ones that influenced their leadership from their sport practice during their lifespan. The last factor analyze the influence of the experiences lived playing sport roles during the lifespan.

Overall, the study's findings extend the knowledge around leadership development explaining how the sport practice influence it. This study and its specific findings could have implications for job recruitment in human resources and also in the revaluation of the sport in the society and therefore, schools, not only for its health benefits but also for its influence in the development of interpersonal and behavior competences.

Future research could also address some of the limitations in the study. In particular, research could (a) expand on the diversity of managers that are interviewed, (b) focus more closely on the differences and similarities regarding in the sport trajectory of women and men leaders and (c) to explore common patterns in managers who have practiced outdoor sports that involve risk.

First, future studies could include a broader range of managers depending on different sport profiles or different sectors (sport organizations, banking, health, etc.) to expand the data and obtain more conclusive results. Second, this study has not taken into account the similarities and differences between males and women leaders and its results are based on a sample in with predominate male managers. Third, the results point out that outdoor sports and the risk involved are reported by the interviewed managers as a key element for developing competences as decisions making.

More research around this need to be done to compare the outputs of conventional sports, outdoor sports and emerging sports. Future research needs to explore these lines of investigation to continue filling the gaps and extending the knowledge around leadership development.



## **CHAPTER 7: CONCLUSIONS**

“Sport is an institution that provides scientific observers with a convenient laboratory within which to examine values, socialization, stratification, and bureaucracy to name a few structures and processes that also exist at the societal level. The types of games people choose to play, the degree of competitiveness, the types of rules, the constraints on the participants, the groups that do and do not benefit under the existing arrangements, the rate and type of change, and the reward system in sport provide us with a microcosm of the society in which sport is embedded.”

(Eitzen & Sage, 1997, p. 14)





This chapter sets out the final conclusions of this thesis. It consists of the following five sections: final conclusions, proposed theoretical model, limitations of the research presented here, potential areas for future study and practical implications. The first of these sections brings together the conclusions of the three studies that make up this thesis in order to answer the overarching question posed in the first chapter. The chapter goes on to propose a theoretical model on the development of leadership skills and abilities through lifelong participation on sport. This second section corresponds with the concepts laid out in the theoretical framework of this dissertation. This is followed by a discussion of the limitations of the research and suggestions for future studies. Finally, there is a review of some practical implications of the research with an eye toward its transferability and adoption in organizations.

### Final conclusions

In order to systematically address the question that was posed at the start of this research, these conclusions are broken down into the three studies that emerged from this initial question. The first three subsections of this chapter, then, correspond to the three secondary research objectives generated by the initial question.

#### *Design of the Sports Trajectory Questionnaire (STQ)*

This study sought to meet the objective of designing a fast and easily administered instrument that could be used at any stage of a person's life to gather information about his or her lifelong relationship with athletic activity, following the *Lifespan Developmental Trajectory* approach (Baltes *et al.*, 1980). In this case, a self-administered questionnaire was designed, as this method has been shown to be an effective way to collect data on large populations (Brace, 2018).

The review of the existing literature on instruments designed to collect data on athletic activity turned up a large number of previously created questionnaires, many of which gather information about athletic activity at a specific moment in a person's life (Ferrando, 2006; Forsén et

al., 2010; García-Bengoechea et al., 2017; Godin, 2011; Godin & Shephard, 1985; Herman et al., 2009). Other studies used these data to divide people into athletic profiles (García et al., 2009; Guijarro-Romero et al. 2020). Beyond these studies that take a snapshot of a single moment in time, others have adopted a *Lifespan Developmental Trajectory* (LP) approach. For example, some research has collected data on specific aspects of participation in sports such as competitiveness and motivation (Gavin et al., 2014; Sikka et al., 2015; Sorenson et al., 2015). Other studies have been conducted using interviews designed to collect data on people's history with sports, (Kendellen & Camiré, 2019; Puig et al., 1996; Shih, et al., 2016), but the literature review was unable to identify any previously existing questionnaires that compile information on a person's lifelong trajectory in sports.

Based on this literature review, an online self-administered questionnaire was designed. The goal is to standardize the interview for all participants, in order to ensure that all the respondents answer the right items and that these questions are always posed in exactly the same way (Brace, 2018). The instrument's validity was guaranteed via consultation with experts on the topic and a review of the relevant literature (Rattray & Jones, 2007). The instrument was designed to measure two dimensions using six variables and 99 indicators, covering five life stages in accordance with the LP approach (Baltes et al. 1980; Day, 2011; Liu et al, 2021). The design allows for the creation of profiles for the purposes of comparison with other variables, thus making it possible to study the role that physical activity and participation in sport can play in the development of various aspects throughout a person's life. A pilot study featuring the participation of 129 university students (111 men and 18 women) was carried out for the purposes of addressing this second objective. The pilot study resulted in the creation of six athletic profiles out of 23 possible profiles. It should be noted that, in this study, the athletic profiles emerged from a combination of four variables: regularity of activity, type of sport or activity (individual or team), modality (competitive or non-competitive) and number of different sports and activities.

Therefore, the results of this study are consistent with the objective of designing an online instrument that is quickly and efficiently able to collect data on a person's lifelong trajectory when it comes to sport and physical activity. The study was also successful in creating a series of athletic profiles that can be compared with other variables so as to study the role of sports and athletic activity in the development of various aspects over the course of a person's life. The results indicate that the STQ seems to be an effective tool for collecting data on an individual's physical activity and participation in sports, regardless of the person's stage in life (from childhood to adulthood). The instrument is also able to generate profiles that make it possible to analyze the relationships between certain elements of people's athletic trajectory and any other variable. These findings represent a contribution to the growing body of literature analyzing how people participate in sports throughout their lives (Predovan et al. 2019).

### *Comparison of the athletic profile of the Catalan population as a whole with that of a sample of managers*

Based on the evidence that physical activity contributes to personality changes (Allen & Laborde, 2014), this study answers Murphy and Johnson's (2011) call for further exploration harnessing the potential of the Lifespan Developmental Psychology approach to examine the phenomenon of leadership from different angles. Specifically, the study investigates the role of athletic activity as a dynamic behavioral process among the adult population.

In order to address the second objective of this dissertation, this second study analyzes the athletic profiles of managers in comparison with those of the Catalan population at large. To this end, the STQ was administered to a sample of 86 managers (23 women and 63 men) from a range of companies in Barcelona, and the results were compared to those collected from a sample of 274 people (127 women and 147 men) intended to be representative of the general population. As noted above, the STQ gathers data on respondents' lifelong trajectory when it comes to sports (Riera &

Moragas, 2021). Following Liu et al. (2021) the study expected to find a significant relationship between athletic trajectory and leadership.

Broadly speaking, the results of this study support the initial hypothesis that people in management roles tend to have different track records in sports than those who do not work in these roles. However, it is critical to analyze these findings in great detail. Following the study by Riera and Moragas (2021), three variables, regularity of activity, type of sport or activity (individual or team) and modality (competitive or non-competitive), were chosen to analyze the participants' sports trajectory and to create athletic profiles. The results show significant differences between the groups in terms of these variables. Firstly, the group of managers were more likely than the general population to be persistent in their physical activity throughout their lives, and they had more of a tendency to participate in competitive sports. Managers were also more likely to take part in both individual and team sports, while the predominant profile among the population as a whole consisted of people who were only involved in individual sports. These differences are especially of interest in the context of numerous prior studies that have compared how a range of leadership abilities and skills can be developed through individual and team sports (Allen *et al.*, 2011; Franck, 2009; Gené & Latinjak, 2014; Jonker *et al.*, 2010; Korovljev *et al.*, 2016; Madic *et al.*, 2015; Van Vianen & De Dreu, 2001; Weinberg & Gould, 2014) and have looked at the associations between leadership and the competitive elements of sports (Coakley, 1983; Dionigi *et al.*, 2011; Madic *et al.*, 2015; Wright, & Côté, 2003). Therefore, the results of the study have allowed it to meet the specific objective of identifying similarities, differences and patterns in the athletic trajectories of a sample of managers from Barcelona as compared to a sample of the Catalan population as a whole.

To our knowledge, this is the first study of its kind to adopt an LP approach to compare the lifelong athletic trajectories of managers with those of the adult population as a whole. In short, this study represents an important step forward toward a new perspective on the development of leadership, underlining how a history with sport can contribute to the development of certain skills, which, in turn, can exert a direct or indirect effect on the development of leadership.

Despite these interesting findings on the differences between the athletic trajectories of managers and those of the population in general, it is not possible to state with confidence that participation in sports is necessarily linked to the development of leadership. While the data suggest such a connection, more research is required to confirm it. Future researchers should consider using qualitative or mixed methods to gain a fuller understanding of this interesting topic.

### *Translating an athletic trajectory into leadership development*

In light of the results of the study described above, this study analyzes the effects of lifelong involvement in athletic activity on the development of leadership skills and abilities. Despite the burgeoning research on the transfer of knowledge between sports and the business sector (Burnes & O'Donnell, 2011; Frawley et al., 2018; Jalonen et al., 2018; Ryan & Dickson, 2016; Seppänen, 2020; Thornton & Etxebarria, 2021; Trapp, 2014; Vilhelmsdottir et al., 2016; Wallenberg, 2021), we were unable to find any studies focusing on the analysis of the lifelong sports trajectory of managers. If we are to address this gap in our knowledge of how leadership is developed, there is a need to explore whether and how lifelong experience with sports and athletic activity (McCall, 2010) might influence the development of leadership skills.

Following up on the previous study described above (Riera & Moragas, 2021), this research adopted a qualitative methodology in which data were collected via 17 interviews with managers from a range of industries. The results confirm the initial hypothesis, indicating that an athletic trajectory does in fact influence people's development of leadership abilities and skills. The data gathered in the interviews also shed light on how this influence functions and how leadership habits developed in the context of sports can be transferred to a business setting. These findings show that the influence exerted by lifelong sports participation on the development of leadership skills is shaped by four factors: (1) athletic profile, (2) athletic role models, (3) abilities, values, and skills, and (4) experience with playing different roles in sports over the course of one's life.

The results for the first factor, the sports profile (team or individual, competitive or non-competitive and regularity of participation), confirm the findings of prior studies that have observed that individual and team sports engender different kinds of habits. The traits associated with individual sports include the capacity for commitment, responsibility, self-awareness and decision-making skills, while participation in team sports is associated with an ability to delegate responsibilities and with social skills. These findings add to the list of skills associated with individual sports in the literature, which includes an ability to follow rules, discipline, emotional stability, self-motivation and self-control (Gené & Latinjak, 2014; Madic *et al.*, 2015). The characteristics that have been linked to team sports in prior studies include extroversion and social acceptance (Allen *et al.*, 2011; Korovljev *et al.*, 2016). Meanwhile, the results echo findings by Agans and Geldhof (2012), who suggested that participating in both kinds of sports was most likely to lead to the development of leadership skills.

The second factor shows how positive and negative role models (coaches, parents, teammates...) not only influence the development of leadership abilities like interpersonal communication and social skills, but also affect managers' leadership style at work. The third factor touches on the competencies that the interviewees believe emerged from their experiences in sports throughout their lives that influenced their development as leaders. These competencies have been categorized in the results as a function of the relationships involved. Firstly, strategic competencies are defined as those related to organization. Secondly, interpersonal competencies deal with the manager's relationship with others. Finally, emotional and attitudinal competencies have to do with the manager's relationship with him- or herself. The final factor analyzes the influence of experiences with different roles connected to sports (as captains, coaches, coordinators, administrators or managers, etc.) in different stages of the participants' lives. The data show that many participants underlined the importance of leadership competencies (communication skills, time management skills, responsibility, goal orientation...) acquired through the experiences of coaching or acting in a management role in a sports institution, but they placed less of an emphasis on experience as team

captains. This latter role does not seem to be as influential in the development of leadership, a finding that echoes the results of other studies (Liu et al., 2021).

These conclusions represent a small contribution to the body of knowledge on the development of leadership through participation in sports. The study explores how this participation might shape leaders, and it strives to meet the challenge posed by Allen and Laborde (2014), who observed that while it is clear that participating in sports contributes to the development of adolescents' personalities, it has yet to be determined how taking part in different athletic activities may affect this development in different ways. The results of this study constitute the first steps toward a new line of research into the development of leadership.

### **Theoretical model: Developing leadership skills and competencies through lifelong participation in sports**

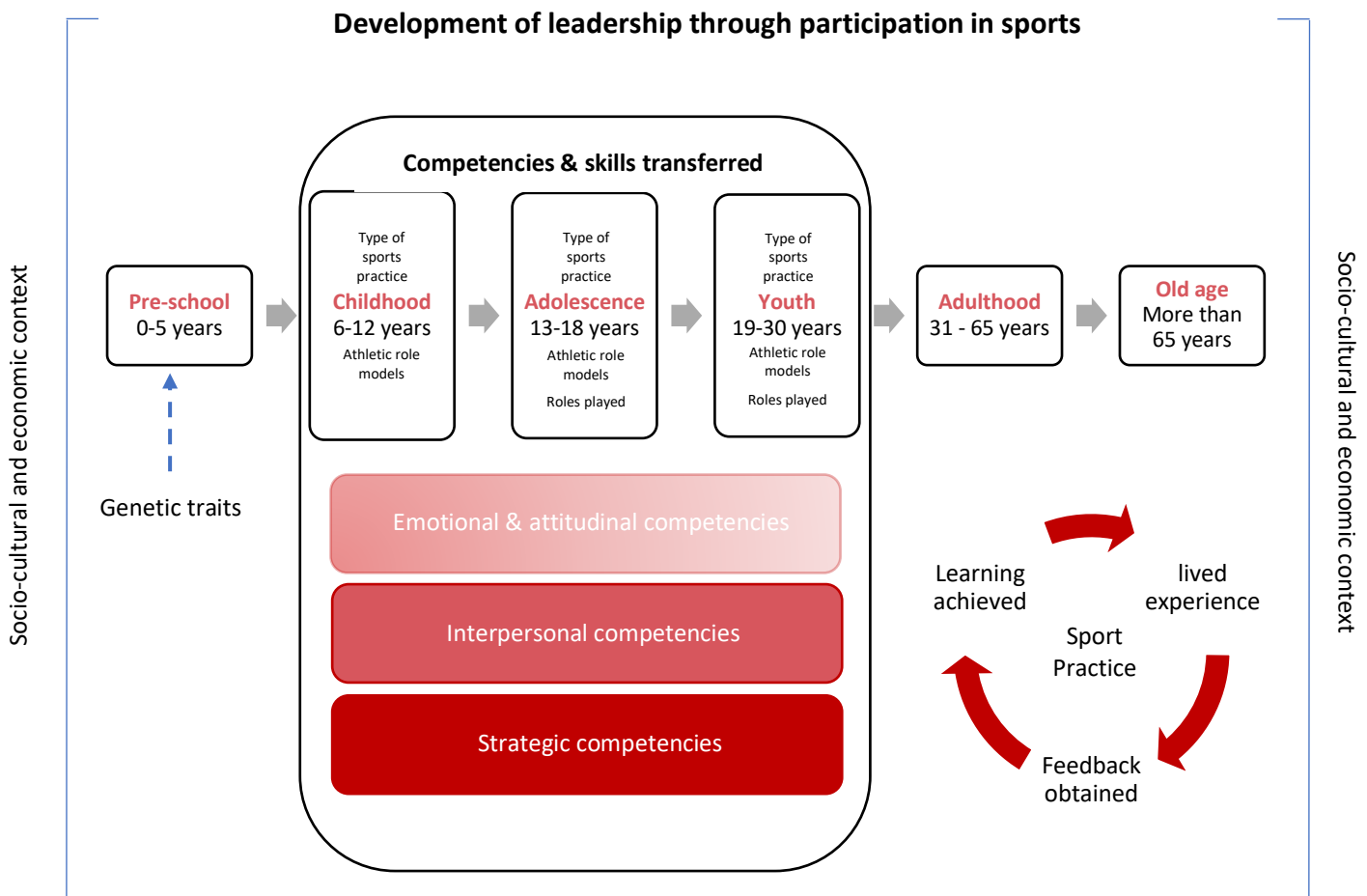
Following the theoretical models identified in the literature review, and in accordance with the results of the three studies described above, this section offers a model for developing leadership through participation in sports over the course of a lifetime (Figure 7). The model is based on Bronfenbrenner's (1992) Ecological Systems Theory, the Lifespan Developmental Psychology approach (Baltes et al., 1980) and the Theory of Leadership Development through Experience (McCall, 2004).

Bronfenbrenner's (1992) Ecological Systems Theory explains the development of human behavior as occurring within a context made up of various systems. This context is made up of five systems which are structured as concentric circles, with the child him- or herself at the center and each successive level fully encircling the previous one, such that the fifth level encompasses the context as a whole. The first level is the microsystem, consisting of the child's family and school, etc. The next is the mesosystem, which includes the connections formed between the child and his or her school and parents. The exosystem is made up of the social system that indirectly affects the child, including issues such as the parents' working hours and the socioeconomic conditions of the child's

family and neighborhood. The macrosystem consists of the social values, customs and laws of the place where the child lives. Finally, the cronosystem deals with the temporal dimension, meaning the changes that occur over time, whether they have to do with external factors (the aging of the father or mother) or internal ones (the physiological changes that affect the child him- or herself with the passage of time). Therefore, the concentric lines in this model embrace all the factors affecting human development within the sociocultural and economic context of a region.

**Figure 9**

*Model of leadership development through a lifelong athletic trajectory*



The LP approach looks at the series of life stages (infancy, childhood, adolescence, young adulthood, adulthood and old age) suggested by a number of researchers (Baltes et al. 1980; Day,



2011; Liu et al, 2021), which make up the natural evolution of an individual. Childhood, adolescence and young adulthood have been identified as the key stages in the development of leadership skills (Day, 2011; Liu et al, 2021; Murphy & Johnson, 2011), and the results here show that many of the most formative experiences with sport take place in these periods in life. In general, each of these stages featured one or more athletic experience (type of activity, sports role models and roles played). These experiences contribute to the development of the various leadership competencies, which based on our results are divided into three categories (emotional and attitudinal competencies, interpersonal competencies, and strategic competencies).

Finally, the Theory of Leadership Development through Experience (McCall, 2004) helps us understand the role of participation in sports throughout a person's life. This theory is visually depicted in the lower right-hand corner of the model, which shows how learning from experience functions as a cycle. We should also highlight that the model recognizes the importance of inherited genetic traits.

## Limitations

Over the course of the three studies described here, we have identified a series of limitations. For instance, the results in the first study are for a sample made up exclusively of students enrolled in vocational training programs in the field of physical activity and sports. This sample is made up mostly of men, so it would be of interest to repeat the study with a larger and more heterogeneous sample.

Following the literature on the lifelong development of leadership (Baltes et al. 1980; Day, 2011), the instrument designed for the purposes of the study, the *Sports Trajectory Questionnaire*, was structured to examine five life stages (infancy, childhood, adolescence, young adulthood and adulthood). However, this final stage could be further subdivided, as the fact that it covers such a large an age range might hinder the interpretation of the results. For example, it is not the same to give up an athletic activity for a year during this fifth stage as it would be to stop for a year earlier in life,

because a single year would represent a much smaller percentage of this longer adulthood stage than it would in the shorter earlier stages.

Another potential limitation of the questionnaire is that, although it was designed to be administered in three languages (Catalan, Spanish and English), it has only been validated in Catalan. While this did not pose a limitation in this study, it would be an issue if the instrument were administered outside Catalonia. The final limitation stems from confusion generated by the item asking about participation in a sport or physical activity over a period of at least a year. The phrasing of the item did not wholly account for seasonal sports, and this ambiguity should be resolved in future research.

There were also some noteworthy limitations in Study II, which analyzed the similarities and differences between the athletic trajectories of a sample of managers and a sample of the general population. Firstly, the results here might not be fully replicated in future studies given the wide age range of the participants, as the sample included people of all ages from 18 to 65. The athletic trajectory of a 60-years-old is likely more consolidated than that of a 25-years-old, as the latter will undoubtedly undergo an evolution in subsequent years. This clearly affects the creation of the athletic profiles, which were formed based on the data that participants could provide at the time of the study. In the case of the younger participants, in other words, these profiles might tend to change over the years. It is possible to measure a person's sports trajectory up to the moment the instrument is administered, but the tool's ability to define a profile varies according to the age of the participant, as the profiles depict each respondent's experiences but are not able to predict the future.

Secondly, it is worth noting that the fact that the sample of managers was much smaller than the sample of the general population makes it difficult to compare the two groups. In fact, both samples were small. Therefore, it would be of interest to recruit larger samples for future studies in order to achieve more generalizable results. Finally, demographic variables such as education level and socioeconomic status were not taken into account in the study. These factors could shed light on

some of the results from the members of the sample of managers who reported participating in sports such as tennis and skiing that are traditionally viewed as elitist.

Study III, which analyzed the influence of the athletic trajectory on the development of leadership, was also subject to some limitations. First, the sample could have included a more diverse selection of managers in terms of their sport profiles and industries (sports institutions, finance, health, etc.). This additional data would have allowed us to come to more conclusive results. The study was based on the most predominant profiles among managers that were identified in Study II, but it would be of interest to include managers with other profiles to see if the results were complementary, or if, on the contrary, the sample would yield new information.

Secondly, this study did not examine the similarities and differences between men and women leaders. Indeed, the results are based on a predominantly male sample, so more research into potential gender differences is needed.

### Proposals for future research

The limitations identified above offer many opportunities for new lines of research. For example, the fact that the STQ gathers information on sports trajectories retrospectively means that the data only reflect participants' past and present, but not their future evolution. In other words, the people who respond to the questionnaire might have seen changes to their trajectories a few years after completing it. This issue could be resolved with a longitudinal study that repeated the data collection process every five to ten years in order to study how sports trajectories evolve. This would shed new light not only on the individual evolution of experiences with sports, but also on broader generational trends in sports trajectories. Thanks to the characteristics of the STQ, it is a valid and useful instrument for quickly collecting data on the athletic habits of a population every year.

Therefore, the instrument makes it possible to analyze the evolution of this phenomenon in a given region, allowing researchers to examine both the sports and activities in which people take part and the forms this participation takes.

Secondly, the limitations of studies I and II offer a promising opportunity to carry out more research with larger and more diverse samples in order to analyze the athletic culture of different regions. To this end, validating the instrument in English and French would help pave the way for studies of the athletic trajectory and/or the sports-related habits of an international population, which would allow researchers to understand the evolution of athletic participation over time and to expand their knowledge of the specificities of different populations. Meanwhile, it would be of interest to apply a gender perspective to the analysis of the influence of the athletic trajectory on the development of leadership in order to explore any similarities and differences in the implications for the leadership competencies of men and women and to identify other potential gender-based patterns.

Finally, the managers who participated in Study III indicated that outdoor sports and extreme sports can play a key role in the development of certain leadership competencies such as decision-making skills and risk management. Further study in this area could use the Lifespan Developmental Psychology approach to compare the leadership implications of conventional sports with those of extreme and emerging sports and other outdoor activities. Additionally, both the questionnaires and the interviews generated a great deal of data that were not explored in the course of this doctoral research. These data certainly have the potential to enrich the results detailed here and to contribute to our knowledge of the subject of this thesis.

In short, future studies could explore some of the potential lines of research suggested here to continue to fill in the gaps in the scientific literature and to broaden our knowledge of how leadership can be developed through participation in sports.

### **Practical implications**

This dissertation featured the design of a self-administered online tool capable of gathering information on an individuals' relationship with sports over the course of their lifespans. One contribution of this research, then, is the creation of a practical, efficient data collection instrument

that is ideal for reaching large swaths of the population. This tool will be of use not only to studies of the development of leadership, but also to researchers in any field of study who are interested in variables related to participation in sports. Beyond the creation of this questionnaire, however, it also is important to underline the range of significant practical benefits that could emerge from the creation of profiles based on the data compiled for this research. The profiles could provide valuable insights to future research based on the LP approach or on other similar theories.

Additionally, the results of this thesis and the conclusions herein might have implications for human resource recruitment and hiring. The results show that participation in sports influences the development of managers and that certain types of activities are tied to the development of certain competencies. Thus, it is not unreasonable to think that the knowledge produced here might have a significant impact on the detection of talent and the hiring of personnel in accordance with the competencies required for different positions. Beyond the value to human resource professionals, this research could also indirectly help to boost the value of sports in society at large and, consequently, in schools. This would be a welcome development, not only because of the health benefits offered by sports, but also due to the role they play in the development of essential competencies such as interpersonal and behavioral skills (World Health Organization, 1994), indispensable as they are to life and coexistence in a developed society.



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**ANNEXOS**

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## Annex 1: Consentiment informat

**INCIDÈNCIA DE L'ESPORT EN EL LIDERATGE EFECTIU DEL SECTOR EMPRESARIAL A CATALUNYA. ANÀLISI A PARTIR DE LA TRAJECTORIA ESPORTIVA I LES COMPETÈNCIES EMOCIONALS I SOCIALS.**

Jo \_\_\_\_\_, amb DNI \_\_\_\_\_  
(Nom i cognoms del participant) (DNI del participant)

He llegit el full d'informació que m'ha estat lliurat.  
He rebut una explicació prèvia de l'estudi.  
He pogut fer preguntes sobre l'estudi.  
He estat informat/da dels objectius de la recerca.

Se m'ha convidat a participar en l'estudi sobre la "Incidència de l'esport, en el lideratge efectiu del sector empresarial a Catalunya. Anàlisi a través de la trajectòria esportiva i les competències emocionals i socials", englobat dins de la recerca de doctorat en Ciències de l'Educació i l'Esport. Comprenc que la meva participació és voluntària i puc retirar-me de l'estudi quan jo vulgui.

Dono lliurement la meva conformitat per a participar en aquest estudi, AUTORITZANT a la investigadora Verònica Riera Batalla, a fer ús de les dades que se'n deriven així com a difondre la informació amb interès educatiu i científic i exigint que es salvaguardi la meva identitat en tot moment.

La investigadora conservarà els registres que es deriven al llarg de la recerca, així com la informació que se'n derivi dels mateixos en els termes legalment previstos.

\_\_\_\_\_  
Nom i cognoms del participant  
Signatura

\_\_\_\_\_  
Data

\_\_\_\_\_  
Investigadora:  
Verònica Riera Batalla  
Signatura

\_\_\_\_\_  
Data





## Annex 2: Document informatiu

**INCIDÈNCIA DE L'ESPORT EN EL LIDERATGE EFECTIU DEL SECTOR EMPRESARIAL A CATALUNYA. ANÀLISI A PARTIR DE LA TRAJECTORIA ESPORTIVA I LES COMPETÈNCIES EMOCIONALS I SOCIALS.**

Aquest document té com a objectiu informar als participants de la recerca del procediment que es durà a terme durant la recerca.

### **Equip investigador**

Aquesta recerca està recolzada pel grup de recerca del GRIES (Grup de Recerca i Innovació sobre Esport i Societat) de la Facultat de Blanquerna i en col·laboració amb la Facultat d'ESADE de la Universitat Ramon Llull.

Té com a investigadora principal la doctorand Verònica Riera, professora del grau de CAFE i Gestió Esportiva, membre del GRIES i doctorand del programa de Doctorat en Ciències de l'Educació i de l'Esport de la Facultat de Psicologia, Ciències de l'Educació i de l'Esport (FPCEE) de Blanquerna de la Universitat Ramon Llull (URL).

La recerca es desenvolupa sota la supervisió dels directors, el Dr. Joan Manuel Batista-Foguet, cap de recerca del grup Leadership Development Research Centre (GLEAD) de la facultat d'ESADE i la Dra. Marta Moragas, directora del grau de CAFE, membre del GRIES i professora de la FPCEE de Blanquerna.

### **Objectius de la recerca**

L'objectiu d'aquest estudi és analitzar la incidència de la pràctica esportiva en el lideratge efectiu dels managers del sector empresarial de Catalunya. Aquesta recerca pretén examinar una mostra representativa formada pels managers del sector esportiu a Catalunya i una mostra representativa formada pels managers del sector empresarial no esportiu a Catalunya.

### **Procediment**

La recerca s'estructura en 4 fases: Una primera fase en la s'administrarà el test Sport Trajectory Questionnaire (STQ) als participants i en funció de les dades recollides, es crearan uns perfils de practicant que categoritzaran els diferents tipus de trajectòries esportives.

La segona fase consistirà en l'administració del test *Emotional and Social Competence Inventory* (ESCI) per tal d'avaluar les competències emocionals i socials dels mànagers. Els resultats es contrastaran amb els perfils de practicant i s'analitzarà la relació existent entre un aspecte i l'altre.

La tercera fase consistirà en avaluar els trets de personalitat a través del test *NEO-Ffi* per tal de descartar la possible variable estranya de l'estudi. A partir de les dades obtingudes en els diferents qüestionaris es farà una anàlisi per tal d'estudiar la relació entre les dimensions pràctica esportiva i lideratge amb l'objectiu de donar resposta a les preguntes formulades a l'inici de la recerca.

La quarta fase consistirà en analitzar la percepció dels mànagers en relació a la influència que ha tingut la trajectòria esportiva en el desenvolupament del lideratge a través d'entrevistes semi-estructurades.

### **Instruments**

El qüestionari STQ és un instrument dissenyat ad hoc per la recerca. Es tracta d'un qüestionari administrat on-line, que es respon individualment a través d'un enllaç i que recull tota la informació sobre la trajectòria esportiva d'una persona. Té una durada aproximada de 15 minuts.

El qüestionari ESCI + ST és un instrument validat i molt utilitzat en el sector empresarial que permet analitzar les competències emocionals i socials dels participants així com el seu estil de lideratge. Es tracta d'un instrument on-line 360º, el que significa que cada persona a més de fer el qüestionari individualment triarà entre 3-5 persones del seu entorn perquè el responguin en relació a aquella persona. Té una durada aproximada de 20 minuts.

El test Neo-Ffi és una versió reduïda d'un qüestionari per veure, a nivell general, els trets de personalitat d'un individu. Aquest qüestionari serà administrat personalment i s'haurà de retornar omplert ja sigui en mà o a través del correu electrònic.

### **Timing**

La primera fase de l'estudi es durà a terme durant la primera setmana de Juny i permetrà respondre el qüestionari STQ durant les setmanes restants del mateix mes.

La segona fase de l'estudi es durà a terme durant la tercera setmana de Juny i permetrà respondre el qüestionari durant el mes de Juliol.

La tercera fase de l'estudi es durà a terme durant la primera setmana de Juliol i permetrà respondre el qüestionari durant les setmanes restants del mateix mes.

La quarta fase de l'estudi es durà a terme durant l'últim trimestre de l'any.

**Beneficis de participació**

L'equip investigador es compromet a facilitar als participants, individualment, els resultats obtinguts de cada qüestionari, el que permetrà veure els seus punts forts a nivell de competències directives així com el perfil esportiu de cada participant.

Per altra banda, s'oferirà l'opció d'assistir a una trobada per grups reduïts amb la finalitat de discutir sobre els resultats finals de la recerca, aclarir conceptes i resoldre dubtes.

Finalment, l'equip investigador realitzarà un informe final amb els resultats obtinguts de la recerca que estarà a disposició de tots els treballadors.

**Caràcter voluntari de la participació:**

La participació a l'estudi es voluntària i la seva adhesió pot ser interrompuda en qualsevol moment de la recerca sense cap repercussió personal ni professional. Els participants tenen dret a fer totes les preguntes que els hi semblin pertinents respecte les característiques de l'estudi i de la seva pròpia participació en aquest.

**Tractament confidencial de les dades**

El fitxer de dades recollides durant l'estudi està sota la responsabilitat del grup investigador davant del qual es podran exercir en tot moment els drets que estableix la Llei 15/1999 de Protecció de Dades Personals.

La confidencialitat de les dades queda garantida i cap nom serà revelat. Les dades recollides durant la recerca són d'ús exclusiu de l'equip investigador per poder dur a terme la recerca i verificar o falsejar les hipòtesis plantejades.

L'imprès de consentiment informat segueix les normes contingudes a la Declaració d'Hèlsinki, així com la informació estipulada en el Títol I, article 12 del Reial Decret 561/1993 del 16 d'abril.



## Annex 3: Sports Trajectory Questionnaire

## Sports Trajectory Questionnaire (STQ)

El següent qüestionari pretén recollir la màxima informació sobre la pràctica físico-esportiva realitzada (esports, activitats dirigides, etc.) al llarg de la vida d'una persona. Ompli els buits en funció de la informació que es demana.

### INFORMACIÓ DEMOGRÀFICA

Sexe	<input type="text"/>	Any de naixement	<input type="text"/>
Email	<input type="text"/>		
Nivell d'estudis	<input type="text" value="Per exemple: Batxillerat"/>		
Estat civil	<input type="text"/>	Fills/es	<input type="text"/>
Ocupació	<input type="text" value="Assalariat/da"/>		
Sector econòmic <sup>1</sup>	<input type="text" value="Vinculat al sector esportiu"/>	Segment	<input type="text"/>

Següent

## Sports Trajectory Questionnaire (STQ)

El següent qüestionari pretén recollir la màxima informació sobre la pràctica físico-esportiva realitzada (esports, activitats dirigides, etc.) al llarg de la vida d'una persona. Ompli els buits en funció de la informació que es demana.

### Trajectòria esportiva

Cal afegir totes aquelles disciplines esportives i pràctiques físico-esportives realitzades amb regularitat durant el període mínim d'un any

#### Etapa de 2 a 6 anys

Has realitzat alguna pràctica físico-esportiva durant aquesta etapa?

Pràctica físico-esportiva <sup>1</sup>	Freqüència <sup>1</sup>	Durada <sup>1</sup>	Tipus de pràctica <sup>1</sup>	Nivell <sup>1</sup>	Tipus d'organització <sup>1</sup>	Amb qui? <sup>1</sup>
<input type="text" value="Introdueix un sport"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

Afegir pràctica físico-esportiva

#### Etapa de 7 a 12 anys

Has realitzat alguna pràctica físico-esportiva durant aquesta etapa?

#### Etapa de 13 a 16 anys

Has realitzat alguna pràctica físico-esportiva durant aquesta etapa?

#### Etapa de 13 a 16 anys

Has realitzat alguna pràctica físico-esportiva durant aquesta etapa?

#### Etapa de 17 a 25 anys

Has realitzat alguna pràctica físico-esportiva durant aquesta etapa?

#### Etapa de > 25 anys

Has realitzat alguna pràctica físico-esportiva durant aquesta etapa?

### Abandonament

Hi ha alguna època de la teva trajectòria en que hagis abandonat la pràctica esportiva durant més de 6 mesos?

Quant de temps?

En quina o quines de les etapes anteriors?

Motiu de l'abandonament



Indica si has exercit altres rols vinculats a l'Activitat Física:

	Si / No	Esport	Anys al càrrec	Etapa d'inici <sup>0</sup>	Tipus d'organització	Remunerat
Capitania	<input type="text"/>					
Tècnic esportiu	<input type="text"/>					
Àrbitre/ Jutge	<input type="text"/>					
Delegat d'equip	<input type="text"/>					
Coordinació tècnica/esportiva	<input type="text"/>					
Direcció o gerència	<input type="text"/>					
Junta directiva	<input type="text"/>					
Presidència	<input type="text"/>					

Sponsors

Alguna vegada has tingut un o més sponsors?



## Annex 4: Guió de l'entrevista als mànagers

## ENTREVISTA MÀNAGERS

### Dimensions i subcategories

1. Trajectòria esportiva:
  - 1.1. Història esportiva
  - 1.2. Socialització esportiva (Per què i com et vas iniciar en el món de l'esport)
  - 1.3. Situació actual
  - 1.4. Polítiques d'igualtat (càrregues familiars)
  
2. Lideratge
  - 2.1. Situació i història professional
  - 2.2. Trajectòria del lideratge
  - 2.3. Transferència entre esport i lideratge
  - 2.4. Ús de l'esport en el sector professional

## GUIÓ D EL'ENTREVISTA

### Introducció

Arrel de les respostes obtingudes del qüestionari sobre trajectòria esportiva han sortit diferents perfils esportius i estem entrevistant als dos perfils amb més prevalença dins dels mànagers per analitzar els punts en comú. **FIL CONDUCTOR:** Què has après de l'esport? Què t'ha aportat? Quins aprenentatges transfereixes en el teu dia a dia com a directiu?

### 1.1. Trajectòria esportiva

Preguntes entorn la trajectòria esportiva que l'ajudin a situar-se i recordar anècdotes (competició, etc.)

1. Quin esport has practicat? Forma de practicar-ho. (freqüència, etc)
2. Has competit? Durant quants anys?
3. Has practicat altres esports? Per què?
4. Si haguessis de definir el teu perfil entre competitiu, no competiu i mixt, com et definiries? Per què?
5. Si haguessis de definir el teu perfil entre individual, col·lectiu o mixt, com et definiries? Per què?
6. *Consideres que la teva trajectòria esportiva ha sigut/és constant?*
7. *Què ha fet que no ho fos?*
8. *pensa en una anècdota esportiva que t'hagi marcat positiva i negativament. Per què?*

## 1.2. Socialització esportiva

1. Per què i com et vas iniciar en la pràctica esportiva?
2. *Quin significat atribuïes a la pràctica esportiva durant la teva infantesa i adolescència?*
3. *I durant la joventut i adulta?*

## 1.3. Situació actual

9. Et defineixes com una persona esportista?
10. Tens fills? Practiquen esport? De quina manera practiquen esport?
11. *Com compagines les càrregues familiars amb l'esport i el càrrec?*
12. Quina importància té la pràctica esportiva per a tu? Com t'afecta en el teu dia a dia?

## 2.1. Situació i història professional

Preguntes per situar al mànager en una organització i entendre bé la seva posició dins l'empresa. (nº empleats de l'empresa, nº de persones a qui dirigeix, etc)

1. Actualment on treballes? Tipus d'empresa? Quina projecció té l'empresa?
2. Quin és el teu càrrec? A quanta gent tens al càrrec? Quanta gent tens per sobre el teu càrrec?
3. Quants anys fa que ocupes aquest càrrec?
4. Has treballat abans en càrrecs similars? Quants anys fa que treballes en un càrrec similar?

## 2.2. Trajectòria del Lideratge

Preguntes entorn el càrrec de mànager i la pràctica esportiva

1. Com et defineixes com a líder? Amb quin estil de lideratge et sents més còmode?
2. Recordes algun referent positiu? I negatiu?
3. Quins estils de lideratge tenien?
4. Recordes alguna situació conflictiva en que el lideratge va ajudar a resoldre-la?
5. Vas tenir algun càrrec de coordinació/direcció durant la teva trajectòria esportiva?
6. I després? Quins càrrecs de lideratge has ocupat tant dins com fora de l'àmbit esportiu (a part del professional)

## 2.3. Transferència entre esport i lideratge

1. Quines competències, habilitats o capacitats consideres necessàries per ocupar el teu càrrec?
2. Hi ha algun element d'aquests que has mencionat que sigui transferència de la pràctica esportiva?
3. Creus que hi ha alguns elements de transferència entre la teva trajectòria esportiva i la manera com exerceixes el teu càrrec? (valors, competències, etc.)

4. Creus que el fet d'exercir càrrecs de lideratge durant la teva etapa de desenvolupament ha influït en que ara siguis mànager d'una empresa? (No tenir por a agafar responsabilitats, construir una identitat entorn el lideratge, reconeixement del líder com a líder, etc.)
5. Hi ha algun element de transferència entre els referents esportius que vas tenir i la manera com lideres?
6. Em podries dir una vivència o aspecte molt positiu que puguis transferir al lideratge?
7. I negatiu?
8. Hi ha algun moment memorable (crític o positiu) del teu lideratge? Com el vas resoldre? Creus que hi ha algun element transferit de l'esport que t'ajudés?
9. Hi ha alguna persona de l'àmbit esportiu que hagi esdevingut un referent per a tu? (esportista, entrenador, directiu)? Per què? què t'agrada d'aquesta persona?
10. Finalment, com creus que l'esport ha contribuït al desenvolupament del teu lideratge?

#### **2.4. Ús de l'esport en el sector professional**

1. Com influeix l'esport en el teu dia a dia?
2. Quan et reuneixes amb altres persones amb càrrec similars al teu, l'esport és un element de cohesió i comentari?
3. Quan contractes personal, tens en compte la seva pràctica esportiva? I en el teu equip proper?
4. *Creus que l'esport t'ha dotat de competències i/o habilitats que t'han ajudat a ocupar aquest tipus de càrrecs?*
5. *I a desenvolupar el càrrec d'una millor manera?*

#### **Conclusions estudis previs**

Per acabar l'entrevista, se'ls explica els resultats obtinguts a l'estudi II i es fa preguntes al respecte.

1. D'acord amb els resultats de l'estudi, els mànagers presenten X perfil. Sabent això, canviaries
2. Canviaries alguna cosa de l'educació esportiva dels teus fills?
3. Creus que aquests resultats poden portar a una re-valorització de l'esport?

#### **Tancament**

Agraïment



## Annex 5: Estudi I publicat





# Sport and physical activity throughout the lifespan: The “Sport Trajectory Questionnaire”

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Recibido: 2020-11-5

Aceptado: 2021-4-12

DOI:

## Sport and physical activity throughout the lifespan: “Sport Trajectory Questionnaire

**Abstract.** Activity and participation in sport have garnered a great deal of attention over the past few decades, due in part to growing awareness of the benefits they offer that lead to a better quality of life. This situation has opened up new lines of investigation in the sport sciences field, including the study of physical activity and sport participation according to the perspective of Lifespan Developmental Psychology, the approach that underlies this study. The aim of this research is (1) to design an instrument to collect information on individuals' lifelong relationships with sport and physical activity (2) to implement the instrument through a pilot test to create profiles that can be compared with other variables, all in order to study the role that physical activity and sport participation play in a range of aspects throughout the lifespan. The results indicate the questionnaire was effective and capable of collecting data on the physical and sport activities of the members of the sample at different moments in the lifespan. It was also able to generate profiles that can be used to analyze the variables of participation in sport and/or physical activity in conjunction with other variable, thus offering a way to measure the impact of physical activity on human development.

**Keywords:** Sports trajectories; lifespan; physical activity questionnaire; physical activity profiles

## Actividad física y deporte a lo largo de la vida de una persona: El “Sport Trajectory Questionnaire”

**Abstract.** La actividad y la participación en el deporte han atraído una gran atención durante las últimas décadas, debido en parte a la creciente conciencia de los beneficios que ofrecen y que conducen a una mejor calidad de vida. Esta situación ha abierto nuevas líneas de investigación en el campo de las ciencias del deporte, incluyendo el estudio de la actividad física y la participación deportiva desde la perspectiva de la Psicología del Desarrollo Lifespan, enfoque en el que se basa este estudio. El objetivo de esta investigación es (1) diseñar un instrumento para recopilar información sobre las relaciones a lo largo de la vida de los individuos con el deporte y la actividad física (2) implementar el instrumento a través de una prueba piloto para crear perfiles comparables con otras variables, todo en con el fin de estudiar el papel que desempeñan la actividad física y la participación deportiva en diversos aspectos a lo largo de la vida. Los resultados indican que el cuestionario fue eficaz y capaz de recopilar datos sobre las actividades físicas y deportivas de los miembros de la muestra en diferentes momentos de la vida. También se logró generar perfiles que se pueden utilizar para analizar las variables de participación en el deporte y / o actividad física en conjunto con otra variable, ofreciendo así una forma de medir el impacto de la actividad física en el desarrollo humano.

**Palabras clave:** trayectorias deportivas; esperanza de vida; cuestionario de actividad física; perfiles de actividad física

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## Introduction

Sport has taken a recognized place as a factor of paramount importance in the development of individuals throughout their lives. Lifespan Development Psychology (LDP) is an orientation concerned with the description, explanation and modification of developmental processes in human life, from conception to death (Baltes et al., 1980). This perspective is based on the assumption that personal development does not stop when an individual reaches adulthood. Instead, each period of life has its own challenges and developmental milestones, and certain adaptive processes can continue to function throughout all periods of life. Part of this approach, then, is about comparing the development of an individual with that of others, and with the person's own state at different times (Baltes et al., 2006).

This perspective has been employed by a wide range of researchers to study the role of physical activity (PA) and participation in sports (PS) in human development at different stages throughout people's lifespans. Traditionally, childhood has attracted perhaps the greatest amount of scholarly attention due to the assumption that earlier age periods are precursors for or contributors to later periods of development (Malina, 1996). Nowadays, however, there is a good deal of literature focusing on adulthood and old age. It remains true, though, that childhood is marked by the most critical and intensive period of brain development in the human lifespan, with the organ achieving 95% of its eventual maximum size by the age of six (Khan & Hillman, 2014). With this premise in mind, Carson et al. (2016) carried out a systematic review to analyze the links between physical activity and cognitive development in early childhood. The results provide evidence that physical activity may have beneficial effects on cognitive development in this period. These conclusions are in line with findings for other stages of the life cycle, which have also shown that higher amounts of physical activity are linked to improved cognitive functioning (i.e. concentration, attention) and to better academic achievement in school-aged children and youth (Biddle & Asare, 2011; Bidzan-Bluma & Lipowska, 2018; Castelli et al., 2014; De Greeff et al., 2018; Erickson, 2019; Taras, 2005). Studies have also shown that physical activity and sports can reduce the risk of age-related cognitive decline, dementia, and Alzheimer's disease in adulthood (Farina et al., 2014; Fondell et al., 2018; Hakala et al., 2019; Sofi et al., 2011), and that they are associated with decreased symptoms of dementia and improved cognitive function and brain plasticity in old age (Engeroff et al., 2019; Gajewski & Falkenstein, 2015; Prakash et al., 2015; Najjar, 2019).

In light of this realization of the important role PA and PS can play in the development of a healthy life, many researchers have gone further and analyzed how the specific ways people take part in sports and physical activity can affect this development (Predovan et

al., 2019; Netz, 2019). For instance, one study (Doré et al., 2018) looked at the associations between the context in which physical activity is undertaken (team sports, informal groups, individual PA) and a range of positive mental health outcomes, as well as symptoms of anxiety and depression in early adulthood. Here, the researchers showed that programs to promote PA in a social setting, whether organized (team sports) or non-organized (informal groups), were more effective than individual PA at enhancing positive mental health and reducing depressive symptoms among youth in transition to adulthood. In the same vein, Stephan et al. (2014) conducted the first study that has documented how personality is associated with the adoption of an active lifestyle across multiple domains, involving a combination of frequent physical, cognitive and social activities. This study contributed to the existing knowledge on psychological traits associated with the adoption of an active lifestyle throughout the lifespan. As a result of the wide range of outcomes that physical activity and athletics have been found to entail, researchers have become increasingly interested in analyzing how people engage in these activities throughout their lifespans.

An analysis of how data on PA and PS tend to be collected from people at different points in the life cycle found that such information has been gathered with a wide range of instruments. For example, a number of questionnaires have been designed to collect this kind of information at specific moments in people's lives. In other words, these tools gather data about PA and PS that people have done at a given moment (Ferrando, 2006; Forsén et al., 2010; García-Bengoechea et al., 2017; Godin, 2011; Godin & Shephard, 1985; Herman et al., 2009). Other instruments have even been used to collect data on PA and PS at a certain time in order to create different kinds of profiles, including decisional profiles of athletes (García et al., 2009) and physical self-concept profiles (Guijarro-Romero et al., 2020). Meanwhile, some researchers have used surveys to collect data about PS and PA over periods of six months or a year prior to their studies (Nowak et al., 2010; Simpson, 2011), and other specific questionnaires (dealing with issues such as competitive sport and motivation for participation) have been created to collect data on specific topics related to PS and PA over a person's lifetime (Gavin et al., 2014; Sikka et al., 2015; Sorenson et al., 2015). Finally, there are a wide range of interviews designed to collect data on individuals' history with sports (Kendellen & Camiré, 2019; Puig et al., 1996; Shih, et al., 2016). However, our search did not yield any questionnaires that brought together data on the physical activity performed during a person's entire life cycle.

Consequently, the aims of this research are (1) to design an online instrument to collect information on PS and PA over the course of a person's lifetime, a tool that can be quickly and effectively administered to a sample at any time, and (2) to implement the instrument through a pilot test in order to create profiles

that can be compared with other variables in order to study the role of physical activity and sport participation in the development of various aspects throughout people's lives.

## Methods

### Participants

A total of 129 students (18 female and 111 male) between the ages of 15 and 25 years from three schools in Catalonia were recruited for this study. They are referred to here as School A (75%), School B (15%) and School C (10%). The students were enrolled in different vocational training programs: 45.7% of the members of the sample were enrolled in a program called CAFEMN (Conducting physical activities in the natural environment), 34.9% of the students were in the first year of a vocational training program called AFE (Animation of physical activities and sports), and the remaining 19.4% were in the second year of the AFE program. All participants were informed about the research and gave their informed consent to participate in this study, which was carried out following the principles of the Declaration of Helsinki.

### Procedure

#### Phase 1: Design and validation of the STQ

The Sports Trajectory Questionnaire (STQ) is a self-administrated online questionnaire created following the premise of some authors that self-report questionnaires are the most practical way of gathering data among large and diverse populations (Sorenson et al. 2015). After conducting a literature review and consulting with experts in the field, the researchers divided the construct into two dimensions (corresponding to the two sections of the questionnaire). It is designed to measure six different variables and consists of 109 items, as shown in Table 1.

The dimension on demographics has two variables and ten indicators scored with either open responses or multiple-choice responses. The dimension measuring Physical Activity and Participation in Sports throughout the lifespan consists of 99 items designed to collect data on four variables. The values for the

**Table 1.** Dimensions, variables and indicators for the design of the STQ

Dimensions	Variables	Indicators
Demographic data	Personal information	Age, sex, e-mail, level of studies, civil status, children, number of children
	Employment Status	Occupation, economic sector and labor segment.
Physical activity and sport participation	Sport participation	practice, sport, frequency, long-term commitment, mode, level, sport organization and with whom
	Quitting sports	Sport participation abandonment, duration, stages and reasons
	Sport roles	Captain, sport technician, judge/referee, sport delegate, sport coordinator, management, board of directors, presidency, sport, years in charge, start stage, organization, salaried
	Sponsorship	Sponsorship, years of sponsorship and start stage

first variable are made up of five life stages (early childhood, childhood, adolescence, young adulthood and adulthood), corresponding to the literature review (Baltes et al. 1980; Day, 2011). All indicators are scored with open responses and multiple-choice responses (Table 2).

The validation of the construct was performed in two phases. The first stage was carried out by three experts in the field of sociology of sport from three different sport schools. They suggested some improvements regarding the stages of development and ethical consent. The second stage of the validation concluded with a final version of the survey that was validated by ten experts in the sport science field from Ramon Llull University. In both cases, the validation of the construct consisted of an on-line survey conducted via Google Forms where the experts assessed the questionnaire in terms of four variables and 50 indicators: coherence (López-Roldán & Fachelli, 2015; Riba, 2016), relevance (López-Roldán & Fachelli, 2015; Heinemann, 2008; Riba, 2016), exclusivity and semantic completeness (Hernández et al., 2010; López-Roldán & Fachelli, 2015; Riba, 2016;), and formal aspects (Heinemann, 2008). This development process is detailed in Table 3.

At each stage of the development process (Figure 1), the survey was revised to include comprehensive content, to improve clarity and usability for the survey taker, and to minimize opportunities for bias. It was designed with a pleasant visual layout along with careful language. The on-line questionnaire can be found at <http://stq.sportupp.com>.

**Table 2.** Sports Trajectory Questionnaire Content

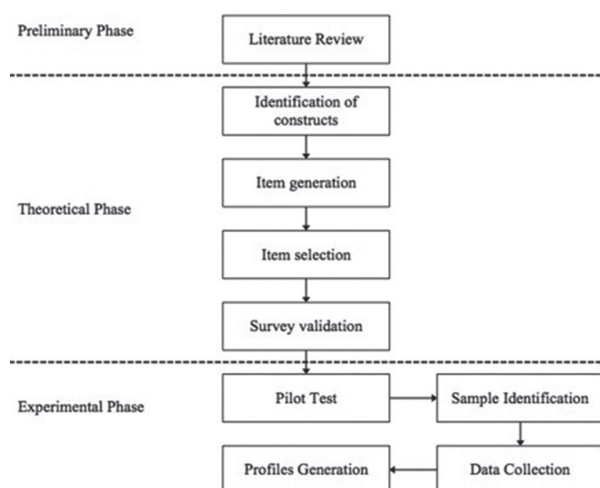
Survey Section	Description	Scoring	# Items
Section I: Demographics	Age, sex, date of birth, level of studies, civil status, children and number of children, occupation, economic sector, economic segment and e-mail address)	Open response (e-mail, number of children), 2 and 6 level multiple choice response (age, sex, level of studies, civil status, children, occupation, economic sector and segment sector)	10
Section II: Physical Activity & Participation in Sport throughout the lifespan	participation, sport, frequency, long-term commitment, mode, level, sport organization and with whom sport is done, abandonment, duration, abandonment stages and reasons, captain, sport technician, judge/referee, sport delegate, sport coordinator, management, board of directors, presidency, sport, years in charge, start stage, organization, salaried, sponsorship, years of sponsorship and start stage	Open response (sport, abandonment stages and years of sponsorship) and 2, 3,4,5,6 and 8 level multiple choice response (Frequency, long-term commitment, mode, level, sport organization and with whom sport is done, abandonment, duration, abandonment stages and reasons, captain, sport technician, judge/referee, sport delegate, sport coordinator, management, board of directors, presidency, sport, years in charge, start stage, organization, salaried, sponsorship and start stage	99
Total			109

**Table 3.** Construct validation

Experts	Field of expertise (Years)	University
<b>Primary Authors *</b>		
Joan M. Batista-Foguet, PhD	Organizational behavior and quantitative statistics	ESADE-Ramon Llull
Marta Moragas, PhD	Sports management	Blanquerna FPCEE- Ramon Llull
Verònica Riera, PhD Student	Sport science	Blanquerna FPCEE- Ramon Llull
<b>Contributing advisors **</b>		
Sixte Abadía, PhD	Sports management	Blanquerna FPCEE- Ramon Llull
Joan Aguilera, AT	Sport Science	Blanquerna FPCEE- Ramon Llull
Josep Campos, PhD	Physical and Sports Education	Blanquerna FPCEE- Ramon Llull
Maria Giné, PhD	Health and Physical Activity	Blanquerna FPCEE- Ramon Llull
Marc Llinàs, AT	Sport Science	Blanquerna FPCEE- Ramon Llull
Adrià Martín, PhD	Sports Sociology and law	Escola Universitària de Salut i Esport (EUSES)
José Morales, PhD	Athletic Performance	Blanquerna FPCEE- Ramon Llull
Ricardo Sánchez, PhD	Sports Sociology	Blanquerna FPCEE- Ramon Llull
Marta Santiago, AT	Sport Science	Blanquerna FPCEE- Ramon Llull
Enric M <sup>a</sup> Sebastiani, PhD	Physical and Sports Education	Blanquerna FPCEE- Ramon Llull
Josep Solà, PhD	Physical and Sports Education	Blanquerna FPCEE- Ramon Llull
Susana Soler, PhD	Sports Sociology	Institut Nacional d'Educació Física de Catalunya (Barcelona)

\* Primary authors were responsible for the authorship, revision, and approval of the survey instrument.

\*\* Contributing advisors reviewed, provided feedback, and suggested edits to the survey

**Figure 1.** The Sports Trajectory Questionnaire development program.

#### Phase two: Implementation of the STQ (Pilot Test)

Once the final version of the survey had been validated by experts, a Pilot Test of the STQ was conducted. It took the form of a study using a retrospective cross-sectional design to analyze the sports trajectory of vocational school students. The first author contacted school board administrators to explain the study

and to ask for permission to collect data. Once permission had been granted, the principal researcher and two other trained researchers explained the study to potential participants at three different schools. After their written assent had been provided, data collection took place in groups of 10-15 in the computer rooms of the schools.

The STQ was completed in the presence of a trained researcher, who explained the procedure and monitored the time. The subjects did not receive any monetary or academic reward for their participation.

#### Data Analysis

To analyze the data, four variables were selected in light of the findings that emerged from the literature about the influence of certain parameters of participation in sports and physical activity on individuals' development throughout their lives (Table 4). To analyze each variable, four methods of coding were applied: The first method of coding pertained to the variable measuring "participation in sports" at each stage in life (1, Yes; 2, No). The second type of coding looked at the variable measuring "number of sports" (1, One sport; 2; Two sports; 3; Three or more than three sports). The third method was related to the variable of "kind of sports"

**Table 4.** Variables and indicators to analyze data from STQ

Variables	Indicators	References
Sport participation	Yes (1) No (2)	Allen et al. (2013), Coakley (2011), Danish et al. (1993), Gould & Carson (2008), Eime et al. (2013), Kleiber & Roberts (1981), Macphail & Kirk (2006)
Competition	Competitive sport (1) Non-competitive sport (2) Both (3)	Coté, Lidor & Hackfort (2011) Dionigi, Baker & Horton, (2011); Musch, & Grondin, S. (2001) Scanlan, & Lewthwaite, (1986)
Kind of sport	Individual (1) Collective (2) Both (3)	Gené & Latinjak (2014), Korovljević et al. (2016), Madic et al. (2016).
Number of sports	One (1) Two (2) Three or more (3)	Reverter et al. (2009) Wiersma, L. D. (2000).

**Table 5.** Profile coding development process

Profile Code	Practice <sup>v1</sup>	Quantity <sup>v2</sup>	Sport <sup>v3</sup>	Competition <sup>v4</sup>
2000	Profile 1	2	0	0
1111	Profile 2	1	1	1
1211	Profile 3	1	2	1
1311	Profile 4	1	3	1
1112	Profile 5	1	1	2
1212	Profile 6	1	2	2
1312	Profile 7	1	3	2
1113	Profile 8*	1	1	3
1213	Profile 9	1	2	3
1313	Profile 10	1	3	3
1121	Profile 11	1	1	2
1221	Profile 12	1	2	2
1321	Profile 13	1	3	2
1122	Profile 14	1	1	2
1222	Profile 15	1	2	2
1322	Profile 16	1	3	2
1123	Profile 17*	1	1	3
1223	Profile 18	1	2	3
1323	Profile 19	1	3	3
1131	Profile 20*	1	1	3
1231	Profile 21	1	2	3
1331	Profile 22	1	3	3
1132	Profile 23*	1	1	3
1232	Profile 24	1	2	3
1332	Profile 25	1	3	3
1133	Profile 26*	1	1	3
1233	Profile 27	1	2	3
1333	Profile 28	1	3	3

\* Profiles that are impossible to exist due the combination of their variables

and had three options (1, Individual; 2, Collective; 3, Both individual and collective). Finally, the last method of coding refers to the variable of "competition" (1, Competition; 2, No competition). Once the data had

been coded, the researchers created profiles according to the combinations of the four variables. This combination shows 28 possible options, as depicted in table 5. Of these 28 possible options, five are ruled out because they are impossible combinations (Profiles 8, 17, 20, 23 and 26), so it can be established that there are 23 possible profiles.

This technique is applied for each stage of development. Thus, each person has a profile for each stage of his or her development. To obtain a final profile, it was decided to use the mode and the relevance of the first and second stages of the development. Once the data had been coded, the researchers divided the data from 129 students into profiles depending on the combination of the four variables. These classifications provide a suitable way to analyze the similarities and differences between profiles and offer the possibility to generalize about the relationship between profiles of PA and PS and any other variable. The statistical measure used to analyze the data was Fischer's exact test, which provided us with the two-tailed p-value.

## Results

The results showed that six profiles out of the 23 possible options accounted for 86% (median) of the students (Table 6). These six predominant profiles are Profile N°1 (Non-participation in sport at some stage of the trajectory), Profile N°2 (One sport, individual and competitive), Profile N°5 (One sport, individual and non-competitive), Profile n°11 (One sport, collective and competitive), Profile N°14 (One sport, collective and non-competitive) and Profile N°27 (Two sports,

**Table 6.** Predominant profiles in each stage

	Stage 1 (2 to 6 years)	Stage 2 (7 to 12 years)	Stage 3 (13 to 16 years)	Stage 4 (17 to 25 years)
Profile 1	35	10	8	6
Profile 2	4	10	17	7
Profile 3	0	0	2	1
Profile 4	0	0	0	0
Profile 5	30	12	10	19
Profile 6	4	4	0	1
Profile 7	1	0	0	1
Profile 9	0	4	2	4
Profile 10	0	1	0	0
Profile 11	18	38	59	37
Profile 12	0	0	1	0
Profile 13	0	0	0	0
Profile 14	25	30	12	5
Profile 15	0	0	0	0
Profile 16	0	0	0	0
Profile 18	0	1	0	1
Profile 19	0	0	0	0
Profile 21	0	4	3	2
Profile 22	0	0	2	0
Profile 24	3	5	2	3
Profile 25	4	0	0	1
Profile 27	4	5	9	5
Profile 28	1	5	2	3
Predominant profiles	116	105	114	81
Total Students	129	129	129	96*
	89.9%	81.4%	88.4%	84.4%

\* 33 students are under 17 years old, and the results do not include them.



**Table 7.** Sport participation, competition, kind of sport and number of sports across the lifespan

	Stage 1: 2-6 years old	Stage 2: 7-12 years old	Stage 3: 13-16 years old	Stage 4: 17-25 years old*
<b>Participation</b>				
Sport Practice	94	119	121	90
Non Sport Practice	35	10	8	6
<b>Competition</b>				
Competitive	23	52	84	47
Non Competitive	67	51	23	30
Both	4	16	14	13
<b>Kind of sport</b>				
Individual	39	31	31	33
Collective	43	69	72	43
Both	12	19	18	14
<b>Number of sports</b>				
One sport	81	90	98	68
Two sports	10	23	19	17
Three or more sports	3	6	4	5

\* 33 students are younger than 17 years old, and the results do not include them.

individual and collective, competitive and non-competitive), as shown in Table 6.

The present study shows that the degree of participation in physical activity and sports for this specific sample increased with age, with the sample reaching 94% participation in the third stage (13-16) (Table 7). This PA and PS prevails during all stages of life in 70.5% of the sample, while the late initiation starting in the second stage (7-12) in sports participation is 14%. Meanwhile, 4.6% of the sample hadn't participated in sports until the third stage (13-16). In total, then, 18.6% of the sample got a late start in PA and PS. Intermittent participation was present in 7.7% of the population, meaning that at some point in their lives these people abandoned sports during one stage but then resumed participation in following stage. Finally, 3.1% of this sample had permanently stopped participating.

The analysis of the variable "competition" (Table 7) shows that competitive sports are predominant in all stages except the first one (2-6 years old). The proportion of respondents playing competitive sports increased with age and reached a maximum in the third stage (13-16), with 69.4% of the participants taking part in these sports. The competitive profile is present in 19.7% of the population, which means that this percentage of participants had done competitive sport during all the stages of their lives. Meanwhile, the non-competitive profile represents 5.5% of the sample. The data analysis shows that no participants fell into a profile characterized by participating in both modalities of sport throughout their life cycles. Finally, the most common profile is a mixed intermittent profile (74.7%), one that includes different modalities of sport: Competitive, Non-competitive or both. 41.2% of the participants with this mixed intermittent profile had changed from non-competitive to competitive sports in the second stage (7-12).

The analysis of the variable "kind of sport" (Table 7) shows that participation in collective sports is predominant during all the stages, reaching its maximum in the third stage with 59.5% of the participants. An

individual profile that does individual sports during all the stages represents 7.7% of the population, while a competitive profile represents 27.47%. The mixed profile, people who do both individual and collective sports during all stages, makes up 4.4% of the sample. The largest part of the sample (60.4%) is the mixed intermittent profile, people who intermittently play individual or collective sports or both.

Finally, the results of the variable "number of sports" indicate that it is most common to participate in a single sport throughout life (Table 7). The profile of people who participate in one sport throughout their lifespans represents 65.9% of the population, while the profile whose members do two sports during all stages of their lives accounts for just 1.1% of the sample. There is no sign of a profile of people who do three or more sports during all stages. Finally, the mixed intermittent profile, people who change the number of different sports or kinds of physical activity they do in different stages, represents 32.9% of the sample.

The results of Fisher's exact test for assessing the independence of gender and profile in stages where collective sports are predominant (stage 13-16 and stage 17-25) show a dependency between gender and sport profile. Similar profiles were grouped, and the groups with higher frequency on the stage were then selected. The two tested groups are profiles 5 and 6 (individual non-competitive sports), and profiles 11 and 12 (collective competitive sports). The resulting two-tailed p-value of 0.00118 shows a dependency between gender and sport profile at the stage of 13-16 years old and the two-tailed p-value of 0.0071 shows a dependency between gender and sport profile at the stage of 17-25.

Finally, we studied the correlation between the variables "kind of sport" (individual or collective) and "competition" (competitive or non-competitive) with Fisher's exact test. The resulting two-tailed p-value of 0.0023 shows a dependency at the stage from 2-6 years of age. This dependency is not present in the stages 7-12 (0.1680) and 13-16 (0.0638), but it appears again

in the stage 17-25, with the two-tailed p-value equal to 0.0001.

## Discussion

The objective of this study was to design an instrument that is fast and effective to administrate at any time and capable of collecting information regarding PS and PA throughout an individual's lifetime. In this research, we designed and developed a questionnaire, a method that has proven to be the best way to approach large populations, as has been corroborated in previous studies (Brace, 2018). The role of the questionnaire is to provide a standardized interview across all subjects, as was done in the designed questionnaire. This is to ensure that all respondents are asked the questions that are appropriate to them, and that, when those questions are asked, they are always asked in exactly the same way (Brace, 2018). Face validity was ensured by including consultation with experts in the field and by conducting a review of associated literature (Rattray & Jones, 2007). The STQ was found to be an effective instrument for collecting data about the history of physical activity from childhood to adulthood. The design of the instrument had to be able to create profiles that could be compared with other variables to study the role of physical activity and participation in sports in the development of different aspects throughout the lifespan. Results show that, based on the combination of different variables, profiles can be generated using the Lifespan Development Perspective, a finding that supports the study by Howie et al. (2016).

Contrary to the results of some studies (Haskell, et al., 2007; Sisson & Katzmarzyk, 2008; Sallis, 2000), the participation of this sample in physical activity and sport practice has increased with age. The explanation for this contradiction comes from the characteristics of the sample, which is made up of vocational students in the sports field. The results of the variable "participation" yield four profiles: consistent sport participants, late initiation sport participants, intermittent sport participants and people who have given up sport. This list of profiles matches with the profiles suggested by Howie et al. (2016).

The analysis of the variable "competition" shows that competitive sports are predominant throughout the lifespan except in early childhood. The prevalence of these sports increases with age and reaches its maximum in adolescence. These outcomes echo previous studies that have suggested that the reason for participation has to do with motivation (De Pero et al., 2009). An analysis of the results of this variable across the lifespan yielded three profiles: the competitive, non-competitive and mixed intermittent profiles. The analysis of the variable "kind of sport" showed that participation in collective sports was predominant during all stages of the life cycle of the sample. These findings can be explained by the social acceptance associated with collective sports (Korovljev et al. 2016). This variable generated four profiles: individual sport

participants, collective sport participants, mixed sport participants and mixed intermittent sport participants. Finally, the analysis of the variable measuring "number of sports" indicates that participation in a single sport is prevalent throughout the lifespan. One explanation of this finding might be found in the characteristics of the members of the sample, many of whom had specialized in one sport to achieve elite status (Wiersma, 2000). The profiles generated by this variable are single sport practitioners and mixed intermittent practitioners. The profiles generated via the analysis of these three variables cannot be compared with any findings of previous research on this topic. Therefore, these outcomes offer a new line of study in sport science.

The results after applying Fisher's exact test show that the variables "gender" and "sport profiles" are dependent. Specifically, women are more likely than men to fall into profiles 5 and 6 (individual-non-competitive sports). Meanwhile, men had a higher probability of falling into profiles 11 and 12 (collective competitive sports). These results could be explained following the social construction gender research of Dworkin and Messner (2002), who conclude that organized sport has perpetuated the cultural hegemony between male athletes and female athletes due to the persistence of conventional masculinity and femininity.

Meanwhile, the relationships between the variables "kind of sport" and "competition" showed differences between stages. In the first stage (2-6 years old) the two-tailed p-value showed a strong dependency, which means that individual sports are more likely to be played in a non-competitive manner and collective sports are more likely to be played in a competitive way. In the second stage (7-12 years old) there is no dependency, so individual and collective sports are played both competitively and non-competitively without any correlation. In the third stage (13-16 years old), the p-value is 0.0638. Following the criteria, this shows a weak dependency between variables, but it can be observed that collective sports, unlike individual sports where there is no trend, are more likely to be competitive than non-competitive. Finally, the last stage (17-25 years old) showed a strong degree of dependency; individual sports are more likely to be non-competitive and collective sports are more likely to be competitive.

No research was found to support these results, but one explanation might emerge from a cultural perspective as to how sport is played in Catalonia. Athletes tend to start in early childhood (stage 2-6 years old) through after-school activities, where competing in a collective sport in school leagues is more frequent than competing in individual sports, which are often done to achieve other objectives such as learning how to swim. During adolescence, most teenagers choose a collective sport in order to be accepted as part of a group, as was explained above. This tends to take place in sport clubs, where athletes often take part in official competitions in different leagues, depending on the

level of the club. Finally, in young adulthood, some athletes continue competing with the same club as before, but others choose to do sport on their own in a non-competitive way.

Beyond the development of the questionnaire, it is important to underline the great potential practical benefits that this creation of profiles may offer. The combination of the four variables explained above generates 23 possible profiles that will appear in different combinations depending on the sample. In this case, only six of the possible 23 profiles actually appeared. The results of this study continue to support the growing body of literature analyzing sport participation throughout the lifespan (Predovan et al. 2019).

Nevertheless, this study has some limitations. Firstly, the results are representative of a small sample made up mostly of males. Thus, it would be desirable to replicate the study with a bigger and more heterogeneous sample. Secondly, the last stage of the questionnaire could have been divided in more stages to collect separate data on adults and elderly adults. The researchers are currently developing the instrument further to minimize the limitations.

For future research, one recommendation would be to analyze the profiles of the participants and their influence on the development of certain variables (i.e. leadership, motivation, diseases) throughout the lifespan, much as has been done with other instruments (Brunet & Sabiston 2011, Howie et al., 2019; Novak et al., 2010). This instrument breaks new ground and provides the potential for examining sport participation throughout a person's life cycle. Perhaps, ultimately, this line of research will promote an alternative perspective for analyzing the development of an individual through physical activity and sport.

This is the first study to design an online self-administrated questionnaire to collect data regarding sport and physical activity of a person throughout life. In conclusion, the Sport Trajectory Questionnaire seems to be an effective instrument to collect data on physical activity and sport participation of an individual at any moment in the lifespan and to generate profiles that can be used to analyze the association of the variables of sport participation and physical activity with any other variable.

**Disclosure statement.** The authors reported no potential conflict of interest.

**Acknowledgements.** The researchers are especially grateful to all students who participated in the current study and to the school board for its collaboration in organizing data collection, as well as to all the experts in the field who shared their professional opinions to help with this research.

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## Annex 6: Estudi II publicat

**SPORT TRAJECTORY OVER A LIFESPAN PERSPECTIVE. A COMPARATIVE STUDY BETWEEN MANAGERS AND GENERAL POPULATION IN BARCELONA**

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**Research and Innovation Group on Sport and Society (GRIES) at the Ramon Llull University (URL), Barcelona, Spain****Abstract**

During the last decade, a new stream of thought has emerged focusing leader development across the lifespan of an individual. As it is suggested in some studies, participation in childhood organized sport may influence the development of the leader, that is why arises the necessity to study the sport trajectory in a sample of managers compared with the general population in Barcelona (Spain), trying to identify if sport and physical activity could be an impact factor in leadership development. A quantitative retrospective cross-sectional design was carried out recruiting a total of 360 participants (150 women and 210 men) aged 18 to 65 years old from Barcelona. Data were gathered using the validated questionnaire named Sports Trajectory Questionnaire (STQ). The results showed significant differences between both samples regarding regularity of practice, kind of sport and competitiveness showing that managers present a more constant, competitive and combined practice of individual and collective sports across lifespan than general population. The approach of this research is focused on the contribution of Physical Activity (PA) and sport practice (SP) to leadership development across the lifespan from the point of view of the Lifespan developmental psychology perspective. Consequently, the aim of this research is (1) to describe the SP & PA practiced beyond a lifetime of a sample of managers and (2) to analyse the findings between this sample and the general population to investigate if sport practice could be an effective element in leader development.

**Keywords:** Sports trajectories. Lifespan. Physical activity questionnaire. Leadership manager**Introduction**

The new social paradigm that has emerged during the last decade encompassed by a context of pandemic during the last two years, arises the need to find referents who can make the right decisions. Organizations are working hard to find leaders who can adapt to these changes and provide the necessary answer by implementing all kind of leadership development programs trying to influence it with effectiveness. (Avolio *et al.*, 2009 & Lacerenza *et al.*, 2017)

Most of the research around leadership has focused on developmental experiences that occur during adulthood, analyzing adult leaders and managers. Although research suggest that there are some human capital factors like expertise, identity or adult experiences that impact on leadership development during adulthood (Day *et al.*, 2009), there is a growing literature that focus on social capital implying that building relationships and network connections are effective in improving executive performance (McCallum & O'Connell, 2009; Meirovich & Goswami, 2021 & Van de Valk & Constas, 2011)

However, during the last decade, another stream of thought has emerged focusing leader development across

Manuscrito recibido: 31/12/2021

Manuscrito aceptado: 11/02/2022

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the life span of an individual. Lifespan developmental psychology (LP) is an orientation that concerns with the description, explanation, and modification of developmental processes in the human life from conception to death (Baltes *et al.*, 1980). This perspective is based in the assumption that each period of life has its own challenges and developmental successes. It is about comparing the development of an individual with that of others and with the person's own state at different times (Baltes *et al.*, 1999)

The research around developmental psychology has demonstrated that childhood and adolescence are the stages of development which significant changes taking place both at the motor, cognitive and emotional levels (Fischer, 1980 & Gardner, 2011). It is a sensitive period where all the lived experiences can influence more significantly the identity construction of an individual (McAdams & Zapata-Gietl, 2015) and, therefore, these early experiences create the foundation for future leadership development to build on (Murphy & Johnson, 2011).

As it is suggested in some studies, participation in some organized activities, like sports during childhood and adolescence (Murphy & Johnson, 2011 & Liu *et al.*, 2020) may influence the development of the leader and predict behaviours in adulthood (Howie, 2016).

Regularity of practice on a lifespan perspective has been extensively studied over the years by numerous scientists, mostly focused on the study of the healthy lifestyle or wellbeing of the population (Hyde *et al.*, 2013). However, there is an increasing interest among identifying sport trajectories (Howie *et al.*, 2016) and long-term patterns of physical activity that could be used as a behavior predictor, to work on different collectives. (Barnett *et al.*, 2008 & Palomäki *et al.*, 2018).

Following this line of investigation, Mäkelä *et al.* (2017) examined whether a greater diversity of sport activities during adolescence predicts higher levels of LTPA in adulthood and concluded that a greater diversity of leisure-time sport activities in adolescence predicts higher levels of LTPA in adulthood in females but not in males.

In this sense, the investigation carried out by Riera & Moragas (2021) showed that the variables of regularity of practice, kind of sports and competitiveness are key elements to analyze the sport trajectory of an individual. Also, it was

showed how the combination of them could be used to build sport profiles to analyze the variable sport practice and physical activity with any other variable as leadership.

During the last decades, the controversy around the benefits of practicing collective sports versus individual sports has entailed some studies analysing how the variable kind of sport could impact in the development of certain personality traits showing significant differences between individual and collective sports. (Weinber & Gould, 2014).

Related to this matter, Madic *et al.* (2015) found that practitioners engaged in individual sports showed more tendencies to observe the rules, disciplined behavior, greater accountability to the commitments and greater emotional stability. They are self-motivated (Gené & Latinjak, 2014) and they have a higher ability to control themselves, probably because they found themselves in situations of making independent decision, they bear the responsibility for success of the achievement of the results (Frank, 2009). Furthermore, athletes playing individual sports had higher scores on "planning" and "effort" than team sport athletes (Jonker *et al.*, 2010).

On the other hand, athletes who are engaged in team sports show higher levels of extraversion (Allen *et al.*, 2011) and social acceptance, they feel better among peers and they have more pronounced ability to form friendships (Korovljev *et al.*, 2016). They also show higher levels on agreeableness and sociotropy than individual sport athletes, this could be explained because team sports provide a suitable ground for achieving trust, an interpersonal factor that give the individual the possibility to rely on others more easily and develop the group activities and relationships and also, altruism and compliance combined with intensity and arrangement. (Nia & Besharat, 2010). Team sports usually request higher levels of interdependence and social interaction (Van Vianen & De Dreu, 2001). The team sport athletes scored significantly higher on agreeableness and sociotropy than did the individual sport athletes.

Competitive sport understood as any organized sport activity in which training and participation are time-consuming and in which the level of performance meets relatively high standards of expectation (Coakley, 1983), provides unique benefits to participants above and beyond those gained from general physical activity (Dionigi *et al.*, 2011). Some authors (Allen & Laborde, 2014) found that organized sport represents a competitive context in which some personality



traits have been found to coincide with greater levels of success. Competition, provide with an opportunity to develop leadership skills through playing with older peers (Wright, & Côté, 2003) and higher levels of extraversion (Madic *et al.*, 2015).

These investigations show how physical activity and sport practice could be an impact factor in the development of the leader that is why arises the necessity to study the sport trajectory in a sample of managers compared with the general population in Barcelona (Spain). The approach of this research is going to focus on the contribution of Physical Activity (PA) and sport practice (SP) to leadership development across the lifespan from the point of view of the Lifespan developmental psychology perspective. Consequently, the aim of this research is (1) to describe the SP & PA practiced beyond a lifetime of a sample of managers and (2) to analyse the findings between this sample and the general population to investigate if sport practice could be an effective element in leader development.

**Design**

**Methods**

A quantitative retrospective cross-sectional design was carried out with the purpose of examining if sport practice could be an effective element in leader development. Data were gathered using the validated questionnaire named Sports Trajectory Questionnaire (STQ). It is an online self-administrated questionnaire that collects all the information regarding the sport trajectory of an individual during his lifespan (Riera & Moragas, 2021). The first group of participants were recruited through a post on LinkedIn and Twitter that had a direct link to the questionnaire. The questionnaire included a previous section where all the participants are informed about the research and by clicking to the bottom agreed they consented to the participation in the research and could continue filling in the questionnaire. The second group of participants were contacted one by one by e-mail or telephone. All of them were provided with all the documents informing about the research. Once the informed consent was signed, they filled in the questionnaire.

**Participants**

A total of 360 participants (150 women and 210 men) aged 18 to 65 years old (Me 37,68 & s 8,98) from Barcelona were recruited for this study in two different stages. The first sample correspond to a non-probabilistic voluntary response sampling composed by 274 participants (127 women and 147 men) labelled as general population, who were recruited through and add in social media (LinkedIn and Twitter). The second group correspond to a non-probabilistic snowball sampling composed by 86 managers (23 women and 63 men) aged 18 to 65 (Me 43,79 & s 9,14) from private companies in Barcelona. The inclusion criteria in this case were: a) to be manager of a private company and b) to have five or more employees. All participants were informed about the research and provided with the informed consent about their participation in this study, which was carried out following the principles of the Declaration of Helsinki.

**Data Analysis**

Following a previous study (Riera & Moragas, 2021), three variables were selected and coded based on the influence to the development of an individual during the lifetime. The first variable refers to the regularity of practice in sport and PA in each stage (1, Yes, if they have practiced during all stage; 2, No, if they didn't practice sports or PA during all stage). The second variable analyzed relates to the kind of sport or PA was practiced (1, Individual, if they have practiced individual sports during the stage; 2, Collective, when it was practiced collective sports during all stage; 3, Mixt, when it was practiced both individual and collective sports). Finally, the third variable measure the present

or absence of the component competition in the sport practice (1, Competition, when the sport practiced was competitive during all stage; 2, No competition, if the sport of PA wasn't competitive during all stage; 3, Combined, when it was practiced both of them). Each variable was coded taking into account all the development stages of the STQ to finally create final profiles of each variable based on the mode and the relevance of the first and second stage (Childhood and adolescence) of the development. Once the data was coded, each variable was analyzed separately to study different outcomes between the two samples.

The statistical measure used to analyze the data was Chi Quadrat, which provided us with the two-tailed p-value.

**Results**

The variable measuring regularity of practice offers two different profiles: constant, when sport was practiced across all lifespan and non-constant, when it wasn't practiced during all life. The results of analyzing this variable show that, in general terms, managers are more constant in the practice of sport and PA than the general population. After breaking down data by decade of birth it is seen that constant regularity of practice is a common denominator for managers born from 60's to 90's whereas constant practice in general population has been increasing over the decades but it is found a decrease in people born in 90's due to a lot of abandon cases found in the sample. The results of Chi Square test for assessing the independence of the variables year of birth and regularity of practice show a strong dependency between these variables in the general population sample (p = 0,0016). As explained before, people born in the 80's have a regular practice profile whereas in people born in 90's it is found a great level of abandon. Contrary to the general population, there is no dependency between the decade of birth and regularity of practice in managers (p = 0,71) because all the managers have a constant profile regardless of their year of birth. The general population has been modifying the regularity of practice over time, while the average manager has been a sporty person during their entire lives who at some point in their trajectory become a manager.

As shown in table 1, there are some differences between managers and the general population

with respect to gender and regularity of practice. It has been found that managers have a constant profile. Most of female managers have a constant profile (69.6%) and it is even more predominant in male managers (90.5%). However, in the non-manager sample it has been found a great equality between constant (52.4%) and non-constant profiles (47.6%). If we disaggregate this by gender, we observe that men have a slightly more constant profile (56.8%) than women (43.1%). The results of Chi Square test for assessing the independence of gender and regularity of practice in both samples, show a significant dependency in the manager sample (p = 0.01) while there is not such dependency in the general population (p = 0.11). Finally, the correlation between regularity of practice variable and the manager-non-manager variable shows a strong dependency. This result confirms what it has been seen at first glance examining the most frequent profiles of each sample. It is important to mention that people born during 2000 was excluded from the analysis of the variable decade of birth in all cases because they didn't have enough time to become managers in most of the cases, but it was included in the analysis of the variable gender because it give us more information in both samples.

One of the analyzed variables in the study is the kind of sport practiced by each individual regarding collectiveness (individual, collective or mixt). This variable reveals three profiles: an individual profile, when the person has a majority practice of individual sports over life; a collective profile, when the sports practice has been mostly collective sports; and a mixt profile, if a person

**Table 1:** Regularity of practice from managers and non-managers.

		Non-Managers				Managers					
		Cons	Non-Cons	Total	Cons	Non-Cons	Cons	Non-Cons	Total	Cons	Non-Cons
Decade of birth	60	28	25	53	<b>53%</b>	47%	17	3	20	<b>85%</b>	15%
	70	30	16	46	<b>65%</b>	35%	24	4	28	<b>86%</b>	14%
	80	42	13	55	<b>76%</b>	24%	27	4	31	<b>87%</b>	13%
	90	34	41	75	45%	<b>55%</b>	4	1	5	<b>80%</b>	20%
Total		134	95	229**	58,52%	41,48%	72	12	84**	85,71%	14,28%
Gender	M	83	63	146	<b>56,8%</b>	43,15%	57	6	63	<b>90,48%</b>	9,5%
	W	58	65	123	47,15%	<b>52,84%</b>	16	7	23	<b>69,56%</b>	30,44%
	Total	141	128	269**	52,41%	47,58%	73	13	86**	84,88%	15,11%

\* Cons: Constant; Non-Cons: Non-Constant

\*\* Gender includes people born during 2000 while decade of birth doesn't include them.

presents a combined practice of individual and collective sports across lifespan. The analysis of this variable has found remarkable differences between both samples with a significant dependency ( $p=0.049$ ). The mixt profile is prevalent in the managers sample (47.61%) while the individual profile is prevalent in general population (41.48%). It has also been analyzed the relationship between the kind of sport and the decade of birth in order to assess how it has evolved over time. The Chi Square Test has not shown any significant dependency between both variables. Individual sports have been the most usual option for non-managers born from 60s to 90s, with a little exception in people born in the 80s where the mixt profile is slightly higher than the individual. It has not been appreciated any remarkable trend from one decade to another. With regard to manager population, mixt profile is the leading one all over time. However, it has been a change in the least present profile, which was collective in 60s and 70s and individual in 80s and 90s.

After examining the result from the gender perspective, it has been found a notable dependency in the non-manager sample between gender and kind of sport ( $p=0.006$ ). Women present more often an individual profile, while men present a very similar trend in the three profiles. This dependency is not relevant in the manager's sample. Collective profiles get a very similar result in both samples for men and women. The main difference remains in individual and mixt profiles. Both men and women managers have got a mixt profile instead of individual but this difference is very noticeable in women (Table 2).

Finally, it has been studied the competitiveness profile of each individual regarding the sports that has been practiced across the lifespan. There are three possible outcomes for this categorical variable: A competitive profile, when the individual has a majority practice of competitive sports; a non-competitive profile, if the person has practiced sports but recreationally or by medical prescription; and a combined profile when people present both competitive and non-competitive sports practice. The results show that general population have a less competitive profile than managers (41.48%). As shown in table 3, managers present profiles where the combination of both competitive and non-competitive (47.61% for managers and 34.50% for non-managers) are more present than in general population. This is demonstrated with a strong dependency between the manager/non-manager binary variable and the kind of sport variable ( $p=0.00085$ ). After exploring the variable decade of birth, it is shown that managers who were born in 60's and 70's have a profile where it prevails the combined option (competitive and non-competitive) while in the managers who were born from 1980 (80's) to 1999 (90's) prevails the competitive profile. On the contrary, the non-competitive profile is predominant in the general population. The participants who were born from 1960 to 1989 have a non-competitive profile while the ones who

were born during the 90' showed a combined profile.

It has been studied if there are remarkable differences in terms of gender. Combined profile is the most frequent in men, being even more frequent in the manager sample. In the other hand, non-competitive profile is the predominant one in the general population women, whereas in women manager the three profiles are equalled. Men managers have got a similar competitive profile result in both samples (31.50% & 33.34%). The difference in men results has been found in the fact that that half of non-competitive non-managers are translated into combined profile when looking at the manager sample. However, proportion of women of non-competitive profile, which is predominant in non-manager sample, is translated both in more competitive and combined profiles in the manager sample (NC:53.65% to 30.43%; C: 21.95% to 34.78%; 24.39% to 34.78%).

Also, it has been analyzed the relationship between regularity of practice and competitiveness variables and it has been found a very significant dependency. The part of the general population with a constant profile has a combined profile regarding competitiveness, while as it has been shown previously general population has a non-competitive profile (Chi-square test p-value of 6.75E-7). In a similar way, in the manager sample, the probability of having a non-competitive profile is very low, but is much higher for non-constant profile manager. (Chi-Square test p-value of 0.001)

In table 4 it is shown a summary of the Pearson correlation coefficients between all the variables in the study. The ones below 0.05 indicate a dependency between variables. It is rapidly seen that manager and non-manager samples behave quite differently regarding gender. Kind of sport and competitiveness in non-manager sample are related to gender whereas it is only related to regularity of practice in manager population. Another difference is found in the correlation between regularity of practice and decade of birth. It has been found a dependency only in non-manager sample because regularity in manager has remained quite constant in managers born during the last decades while it has been evolving to a more constant profile in the non-manager sample. Table 5 show the Pearson correlation coefficient between managers and general population (non-managers) regarding the three variables studied as it was commented above. Finally, it was analyzed the Pearson correlation coefficient between the managers from the sport sector and the managers from other fields. As it is shown in table 5, there is dependency between both sectors in the variables kind of sport and competitiveness while it hasn't been found any significant correlation between sport sector and non-sport sector in the regularity of practice. Managers from the sport sector are more competitive than the rest of the sectors that are equality in all options (competitive, non-

**Table 2:** Kind of sport from managers and non-managers.

		Non-Managers							Managers						
		Col	Ind	Mixt	T	Col	Ind	Mixt	Col	Ind	Mixt	T	Col	Ind	Mixt
Decade of birth	60	10	24	19	53	18,87%	<b>45,28%</b>	35,85%	6	7	7	20	30,00%	<b>35,00%</b>	<b>35,00%</b>
	70	15	18	13	46	32,61%	<b>39,13%</b>	28,26%	6	9	13	28	21,43%	32,14%	<b>46,43%</b>
	80	15	19	21	55	27,27%	<b>34,55%</b>	<b>38,18%</b>	10	6	15	31	32,26%	19,35%	<b>48,39%</b>
	90	19	32	24	75	25,33%	<b>42,67%</b>	32,00%	2	1	2	5	<b>40,00%</b>	20,00%	<b>40,00%</b>
Total		59	93	77	229*	24%	<b>41,48%</b>	34,5%	24	23	37	84*	34,5%	17,85%	<b>47,61%</b>
Gender birt	M	47	49	50	146	32,19%	33,56%	34,25%	20	16	27	63	31,75%	25,40%	<b>42,86%</b>
	W	24	64	35	123	19,51%	<b>52,03%</b>	28,46%	5	8	10	23	21,74%	34,78%	<b>43,48%</b>
	Total	71	113	85	269*	26,39%	42%	31,6%	25	24	37	86*	29%	27,90%	43,02%

\* C: Collective I: Individual Mixt: Mixt T: Total

\*\* Gender includes people born during 2000 while decade of birth doesn't include them.

**Table 3:** Variables competition from managers and non-managers.

		Non-Managers							Managers						
		C	NC	CB	T	C	NC	CB	C	NC	CB	T	C	NC	CB
Decade of birth	60	13	28	12	53	24,53%	<b>52,83%</b>	22,64%	6	2	12	20	30,00%	10,00%	<b>60,00%</b>
	70	10	19	17	46	21,74%	<b>41,30%</b>	36,96%	6	8	14	28	21,43%	28,57%	<b>50,00%</b>
	80	10	25	20	55	18,18%	<b>45,45%</b>	36,36%	14	4	13	31	<b>45,16%</b>	12,90%	<b>41,94%</b>
	90	22	23	30	75	29,33%	30,67%	<b>40,00%</b>	3	1	1	5	<b>60,00%</b>	20,00%	20,00%
Total		55	95	79	229	24%	<b>41,48%</b>	34,5%	29	15	40	84	34,5%	17,85%	<b>47,61%</b>
Gender	M	46	43	57	146	31,50%	29,45%	<b>39,04%</b>	21	9	33	63	33,34%	14,29%	<b>52,38%</b>
	W	27	66	30	123	21,95%	<b>53,65%</b>	24,39%	8	7	8	23	<b>34,78%</b>	30,43%	<b>34,78%</b>
	Total	73	109	87	269	27,13%	<b>40,52%</b>	32,34%	29	15	41	86	33,72%	17,44%	<b>47,67%</b>

\* C: Competitive NC: Non-competitive CB: Combined T: Total

\*\* Gender includes people born during 2000 while decade of birth doesn't include them.



**Table 4:** Pearson correlation coefficient for of practice, kind of sport and competitiveness, decade of birth and gender variables.

	Decade of Birth	Gender	1	2
<i>Non-managers</i>				
1.Regularity of practice	6.12 E-8	0.11	-	-
2. Kind of sport	0.64	0.0061	0.0016	-
3. Competitiveness	0.068	0.00028	6.74 E-7	4.74 E-12
<i>Managers</i>				
1.Regularity of practice	0.071	0.016	-	-
2. Kind of sport	0.81	0.57	0.013	-
3. Competitiveness	0.27	0.17	0.0017	2.76 E-8

Notes: \* $p < 0.05$

**Table 5:** Pearson correlations coefficient for general population and managers samples.

	Regularity of practice	Kind of sport	Competitiveness
General/Manager**	8.49 E-5	0.049	0.00085
Sport/Non-sport**	0.11	0.0071	0.0026

\*General population sample (non-managers) vs manager sample

\*\*Managers from the sport sector versus managers from the sport sector

competitive or combined). Although, managers from the sport sector present a profile less individual than the rest of the managers who present a profile less collective, both of them show high prevalence in mixt profile.

### Discussion

The current research analysed the sport trajectories of a managers' sample trying to move forward to explore the process of leader development. In accordance to Liu *et al.* (2020), the present article predicted a significant relationship between sport trajectory and leadership development. In general terms, findings of this research support the initial hypothesis that managers and non-managers have a different sport trajectory but it is important to analyse it more closely.

#### Regularity of practice

The results of analyzing this variable, identify two trajectories in both managers and non-managers: constant and non-constant profiles. Is understood as a constant profile, people who has practiced sports or physical activities across their lifespan, while a non-constant profile refers to a sum of different behaviors as abandonment, late joiners or people who come and go from sport practice. In this regard, Barnett *et al.* (2008) identified four trajectories: inactive, increasers, active and decreaseers, depending on socioeconomic and demographic factors. More specific, Howie *et al.* (2018) identified different sport trajectories depending on the gender: consistent sport participation, that was common in both genders and non-consistent sport practitioners that varied based on gender to sport dropouts, sport joiners and non-participants.

In this research, even both genders present both profiles in both samples, managers present a predominant sport constant profile in both male (90.5%) and female (69.6%) while the non-managers' sample, show equality between the two profiles with a slightly difference in the constant profile between men (56.8%) and women (43.1%). This difference between the prevalence of the constant profile between male and female support the findings obtained by Mäkelä *et al.* (2017) suggesting that males tend to maintain their level of PA better than females. This difference is even more pronounced when a leading position is added and the person has to reconcile it with sport, family and personal life as it happens with women managers. In this case, it's difficult to find time for everything so they tend to choose work and family while men that can reconcile all factors is due to a third party (Moragas, 2014).

In the same direction, after exploring the results by decade of birth it is showed that managers present a constant profile over time while general population have an increasing constant profile during 60's, 70's and 80's and a non-constant profile in people born in the 90's. These results are in accordance to Breuer & Wicker (2009) who performed a longitudinal study demonstrating that sports activity increases with increasing age in general population. The difference found in people born in the 90's are in accordance to Keating *et al.* (2005) who carried out a meta-analysis in which they found that, nowadays, about 50% of college students don't participate in adequate amounts of PA. Guided by the social cognitive theory, researchers identified 4 different determinants of college students' PA: personal, social, cognitive, and environmental factors that can explain this results and suggest that current colleges don't encourage students to be an active adult. Although every year there is more engagement to sport practice among the Catalan population (Observatori Català de l'Esport, 2016) this practice is not constant due to the abandonment of adolescents

and young people (García & Llopis, 2017). In relation to the constant practice of sport among managers, there is not enough literature that could explain these finding beyond thinking that average manager has been a sporty person during their entire life who at some point in their trajectory become a manager.

#### Kind of sport

Three trajectories were identified, in both samples, derived from exploring the participation in individual and collective sports or physical activities: individual, collective and mixt (both individual and collective). In accordance to AFEC, 2019, the results of this study, found that individual profile is prevalent in general population. In the other hand, managers show a mixt trajectory. It was not found literature that can support or contradict the results found around the managers sample, but, these results, can be the effect of a positive youth development as it is suggested in the study carried out by Agans & Geldhof (2012) who investigate the developmental effects associated with participation in individual sports, team sports, and dance-type sports across a stage of life of 3 years. The results indicated that youth who participated simultaneously in both individual and team sports, showed the most favorable outcomes in Positive Youth Development.

The differences found between the two samples regarding the variable kind of sports, are important with regard to the psychological characteristics according to the type of sport as suggested by Weinberg & Gould (2014) who demonstrates that athletes who belong to individual sports and those who belong to the collective sports, have different personality traits. Knowing the psychological characteristics in relation to the type of sport, it is interesting to continue investigating more comprehensively the outcomes of the mixt profile that all managers present, both male and female.

#### Competitiveness

The results of analyzing the variable competitiveness show that general population have a less competitive profile than managers who present profiles where competition and the combination of both competitive and non-competitive are more present than in general population. These findings are in accordance with Allen & Laborde (2014) who postulate that athletes competing in national or international competitions report higher levels of conscientiousness and lower levels of neuroticism. These personality traits are related with athletic success but also are observed in other performance context as occupational success. Also, it is seen that the competitive profile is transformed into a combined profile progressively. It is an expected result because competition is mostly linked to younger stages of life. Participants may abandon competition but continue practicing sport.

The combined profile is the most frequent in men, being even more frequent in the manager sample. In the other hand, non-competitive profile is the predominant one in the general population women, whereas in women manager the three profiles are equaled. These results are in accordance to Warner & Dixon (2015), who revealed that women and men tend to view and interpret competition differently. They also have different physiological, psychological and social reactions to it, which strongly impact their sport experiences. During the last decades, boys and girls were socialized differently into sport, this impacts how they view competition, and the centrality of competition to their sport experience (Dixon, 2008) These facts lead to find more competitive sport practice in men than in women.

## Limitations

This study presents several limitations that need to be taken into consideration. The results presented above may be different in future analysis generations as the current participants were people from all ages. Consequently, the sport trajectory of a 70 years old person is probably more consolidated than the one from a 25 years old person, that it will evolve during the following years. This offers an interesting opportunity to repeat the study every 5-10 years to study the evolution of the sports trajectories. In addition, the small manager sample provides limitations in comparison with the other samples and difficult the generalization of the findings. Finally, demographic factors such as level of studies or socio-economic status were not taken into account and could help to understand some results.

## Conclusions/Concluding comments

As is known, this is the first study to identify sport trajectories in a sample of adults comparing managers with general population across lifespan. Staring from the evidence that physical activity contributes to personality change (Allen, & Laborde, 2014), this study answers the call of the authors Murphy & Johnson (2011) to explore the lifespan approach in leadership development in a variety of ways conceptualizing physical activity and sports involvement as a dynamic behavioral process.

Despite the positive findings around the different trajectories in managers and general population it is not possible to confirm if sport practice and physical activity can impact on leader development as it is suggested, so it will require more research to explore this approach. Also, studies incorporating qualitative analyses and mixed methodologies will gain a clearer understanding of this topic of interest.

In sum, the present study represents an important first step toward a new perspective of leadership development, in which the sport trajectory of a person and the sport experience and context lived around the sport can impact on the development of certain skills that could have a direct or indirect effect towards leadership development. More research around this line of investigation could be useful in human resources recruitment.

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