Bewegung und Sport
Psychologische Grundlagen und Wirkungen
Movement and Sport
Psychological Foundations and Effects

Proceedings of the
VIII European Congress of Sport Psychology 1991 in Köln
Volume 1
Edited by Jürgen R. Nitsch and Roland Seiler

Motivation, Emotion, Stress

ACADEMIA

Bei der Frage nach psychologischen Grundlagen und Wirkungen sportlicher Betätigung spielen die Themen Motivation, Emotion und Stress traditionell eine zentrale Rolle in sportpsychologischer Forschung und Anwendung. Dieser erste Band des Berichts über den VIII. Europäischen Kongreß für Sportpsychologie gibt hierzu in 52 Beiträgen aus 20 Ländern einen differenzierten Einblick in den internationalen Forschungsstand.

Viele Beiträge werden dabei nicht nur für Sportpsychologen, sondern auch für andere Sportwissenschaftler, Psychologen und nicht zuletzt auch für Sportstudierende und Sportpraktiker interessant sein.

Referred to the question of psychological foundations and effects of sport activities the topics of motivation, emotion and stress traditionally play a central role in sport psychological research and application. 52 articles from 20 countries included in this first volume of the Proceedings of the VIIIth European Congress of Sport Psychology provide a substantial survey of the international state of the art.

Many of these contributions will not only be of high interest to sport psychologists but also to other sport scientists, psychologists and last but not least to students of sport sciences and physical education and sport practioneers, as well.

ACADEMIA VERLAG SANKT AUGUSTIN

ISBN 3-88345-583-0

2015

VIII. EUROPÄISCHER KONGRESS FÜR SPORTPSYCHOLOGIE
VIIIth EUROPEAN CONGRESS OF SPORT PSYCHOLOGY
10.-15. September 1991 in Köln

Veranstalter · Organizer

Arbeitsgemeinschaft für Sportpsychologie in der Bundesrepublik Deutschland e.V. (asp)

im Auftrag der · on behalf of

Fédération Européenne de Psychologie des Sports et des Activitées Corporelles (FEPSAC)

in Zusammenarbeit mit · in cooperation with

Deutsche Sporthochschule Köln (DSHS)

Schirmherrschaft · Patronage

Anke Brunn, Ministerin für Wissenschaft und Forschung des Landes Nordrhein-Westfalen

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Bewegung und Sport - Psychologische Grundlagen und Wirkungen
Movement and Sport - Psychological Foundations and Effects

Band · Volume 1
Motivation, Emotion, Stress

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Band · Volume 1:
Motivation, Emotion, Stress

Band · Volume 2:
Bewegungsregulation und motorisches Lernen
Motor Control and Motor Learning

Band · Volume 3:
Psychologisches Training
Psychological Training

Band · Volume 4:
Gesundheitssport - Bewegungstherapie
Health Sport - Movement Therapy

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Motivation, Emotion, Stress

herausgegeben von · edited by

Jürgen R. Nitsch und Roland Seiler

unter Mitarbeit von · in collaboration with

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Die Deutsche Bibliothek – CIP-Einheitsaufnahme

Bewegung und Sport : psychologische Grundlagen und Wirkungen ; Bericht über den VIII. Europäischen Kongress für Sportpsychologie = Movement and sport / hrsg. von Jürgen R. Nitsch und Roland Seiler. – Sankt Augustin : Academia -Verl.
NE: Nitsch, Jürgen R. [Hrsg.]; European Congress of Sports Psychology <08, 1991, Köln>; PT
Bd. 1. Motivation , Emotion, Stress / unter Mitarb. von Dorothee Alfermann. – 1993
ISBN 3-88345-583-0

1. Auflage 1993

Postfach 16 63, D–53734 Sankt Augustin
Printed in Germany

Umschlag: Lengowski und Partner, Köln
Herstellung: Richarz Publikations-Service GmbH, Sankt Augustin

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6 Emotionen im Sport · Emotions in Sport

Vorwort

Seit dem ersten Europäischen Kongreß für Sportpsychologie 1968 in Varna hat sich die Sportpsychologie maßgeblich weiterentwickelt und verändert. Sie hat sich neben dem Leistungssport zunehmend auch anderen Bereichen von Bewegung und Sport zugewendet und neben der Forschung in vielfältiger Weise den Anwendungsbezug ausgebaut. Der *VIII. Europäische Kongreß für Sportpsychologie vom 10.-15. September 1991 in Köln* wurde zu einer herausragenden Gelegenheit, den internationalen Forschungsstand zu verdeutlichen und Leitlinien für die zukünftige Entwicklung zu erörtern. Über 400 Teilnehmer aus 40 Ländern nutzten diese Gelegenheit und gestalteten den Kongreß zu einem in der thematischen Vielfalt und Qualität der Beiträge beeindruckenden wissenschaftlichen Ereignis.

Das zentrale Anliegen des Kongresses war es, die "unsichtbaren" Teile von Bewegung und Sport, d.h., deren psychologische Grundlagen und Wirkungen, zu erhellen:

- Was kann die Sportpsychologie dazu beitragen, körperliche Tätigkeit zu beschreiben, zu erklären, vorherzusagen und zu beeinflussen?
- Wie sollte körperliche Betätigung gestaltet und genutzt werden, um psychische Wirkungen zu erzielen, die im Hinblick auf die Förderung der psychosozialen Entwicklung, der Leistungsfähigkeit, der Gesundheit und der Lebensqualität wünschenswert erscheinen?

Vor dem Hintergrund dieser Fragen vermitteln die insgesamt 179 in den Kongreßbericht aufgenommenen Beiträge, an denen 296 AutorInnen aus 28 Ländern beteiligt sind, einen sehr breiten und differenzierten Überblick über aktuelle theoretische Konzepte, Methoden, Untersuchungsbefunde und praktische Maßnahmen der Sportpsychologie. Es werden darin zugleich wichtige Trends, aber auch manche Defizite und Anforderungen an die zukünftige Entwicklung der Sportpsychologie deutlich. Dies alles macht diesen Kongreßbericht nicht nur zu einer Dokumentation für die KongreßteilnehmerInnen, sondern zu einer wichtigen Informationsquelle für alle, die an sportpsychologischen Fragen interessiert sind.

Aus der Sicht der Herausgeber gibt dieser Kongreßbericht ein insgesamt ermutigendes Bild von der bisherigen Entwicklung der Sportpsychologie. Ihre weitere Entwicklung wird jedoch wesentlich davon abhängen, wieweit es gelingt, in kritischer Reflexion grundlegende Bezüge weiter auszubauen. Dies gilt insbesondere für die Intensivierung der Bezüge zur Mutterdisziplin Psychologie, zu anderen Sportwissenschaften und zu verschiedenen Feldern der Sportpraxis, weiterhin für die Verzahnung von Grundlagen- und Anwendungsforschung und nicht zuletzt für die strikte Orientierung an hohen wissenschaftlichen und ethischen Standards.

Die Vielzahl und Vielfalt der Beiträge machte es erforderlich, den Bericht in insgesamt vier Bände aufzuteilen, die zugleich zentrale Themenschwerpunkte der modernen Sportpsychologie markieren:

- Band 1: Motivation, Emotion, Stress
- Band 2: Bewegungsregulation und motorisches Lernen
- Band 3: Psychologisches Training
- Band 4: Gesundheitssport - Bewegungstherapie.

Der hier vorliegende erste Band *"Motivation, Emotion, Stress"* wird vom ehemaligen Präsidenten der FEPSAC, Paul Kunath, mit einem Grundsatzbeitrag zum Gegenstandsverständnis der Sportpsychologie eingeleitet. Die anschließenden Beiträge beleuchten dann die Motivationsproblematik unter theoretischen, methodischen und praktischen Aspekten und berichten neue Untersuchungsbefunde. Sodann befaßt sich eine Reihe von Beiträgen mit der bisher noch zuwenig behandelten Frage der emotionalen Grundlagen und Wirkungen des Sports. Ein weiteres Kapitel führt mit der Stressproblematik ein klassisches Themengebiet der Sportpsychologie fort. Auf differentiellen Aspekten sportlicher Betätigung unter besonderer Berücksichtigung von Persönlichkeitsmerkmalen liegt der Schwerpunkt des nächsten Kapitels. Den Abschluß bilden dann einige Beiträge, die wieder zu Grundaspekten der Sportpsychologie zurückführen bzw. die Situation der Sportpsychologie in einigen Ländern beschreiben.

Den Herausgebern ist es ein Anliegen, auf zwei Punkte gesondert hinzuweisen. Die aufgenommenen Beiträge wurden zwar in formaler Hinsicht nach Möglichkeit vereinheitlicht und z.T. auch inhaltlich zur Überarbeitung empfohlen, es wurden jedoch keine Beiträge zurückgewiesen. Manche Formulierungen mögen vielleicht nicht immer sprachlich ganz elegant erscheinen. Es sollte dann in Rechnung gestellt werden, daß viele AutorInnen durch die Festlegung auf zwei Kongreßsprachen (Deutsch und Englisch) nicht in ihrer Muttersprache schreiben konnten.

Die Erstellung des Kongreßbericht hat viel Freude, aber auch Mühe für viele gemacht. Besonderer Dank gilt den Mitgliedern des Wissenschaftlichen Komitees, den Mitglieder des Psychologischen Instituts der Deutschen Sporthochschule Köln und insbesondere Herrn Florian Reimann, bei dem die typographische Hauptlast lag.

Jürgen R. Nitsch und Roland Seiler

Preface

Since the first European Congress of Sport Psychology in Varna 1968, sport psychology has grown and changed dramatically extending increasingly from competitive sport to other settings of movement and sport on the one side and from research to manifold application on the other side. The *VIIIth European Congress of Sport Psychology from 10.-15. September 1991* in Cologne was an outstanding opportunity to review the international state of the art and to discuss guidelines of future development. More than 400 congress participants from 40 countries contributed to a scientific event which proved to be highly impressive with respect to the manifold thematic perspectives and the quality of presentations.

The central issue of this congress was to illuminate the "invisible" parts of movement and sport, that is, their underlying psychological processes and resulting psychological effects:

- What can sport psychology contribute to describe, explain, predict and modify physical activity?
- How should physical activity itself be designed and used systematically to produce psychological effects which are desirable with regard to the promotion of psychosocial development, performance, health and quality of life?

On the background of these questions, 179 papers presented by 296 authors from 28 countries provide a very broad and substantial survey of present theoretical concepts, methods, empirical results and intervention procedures in sport psychology. Beside this, some actual deficits as well as demands to the future development of sport psychology are pointed out. In these respects, the Proceedings are more than a mere documentation just relevant to congress participants but an important source of information for all those who are interested in sport psychology.

In the view of the editors the Proceedings present an encouraging picture of the development of sport psychology until now. However, the future progress of sport psychology will depend on further promotion and critical reflection of some basic interrelations. In particular, this means to intensify the relation of sport psychology to psychology as its mother discipline, to other sport sciences and to different areas of sport, furthermore, to emphasize both fundamental and applied research and last but not least to enforce orientation at high scientific and ethical standards.

With regard to the number and variety of the contributions it was necessary to divide up the Proceedings into four volumes each of them reflecting a central issue of modern sport psychology:

- Volume 1: Motivation, Emotion, Stress
- Volume 2: Motor Control and Motor Learning
- Volume 3: Psychological Training
- Volume 4: Health Sport - Movement Therapy.

The present first volume on *"Motivation, Emotion, Stress"* starts with a position statement on the subject of sport psychology, given by the past President of FEPSAC Paul Kunath. Subsequently, numerous articles are concerned with theoretical, methodological and applied aspects of motivation and present new empirical results. Further on, several contributions focus on a question which is still unsufficiently solved, namely on emotional determinants and effects of sport activity. In an additional chapter, stress as a classic topic of sport psychology is carried on. The accent of the following chapter lies on differential aspects of sport acitivity, especially including relevant personality traits. The final articles lead back to general aspects of sport psychology or rather describe the present situation of sport psychology in special countries.

The editors would like to draw your attention to the following points. All of the presentations included in the Proceedings are adapted to the same formal schema as far as possible and some of them were also recommended for revision by the authors themselves. However, none of the submitted manuscripts was rejected. Perhaps some of the given statements may partially appear as not quite elegant in language. In those cases you should take into account that many authors had to write in a foreign language because of the limitation to only two congress languages (english and german).

Preparing the Proceedings was associated with a lot of pleasure but also with a lot of strenous work of many. We want to give our special thanks to the members of the Scientific Committee as well as to the staff of the Psychological Institute of the German Sport University Cologne, in particular to Florian Reimann who did most of the type-setting and formating work.

Jürgen R. Nitsch and Roland Seiler

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Eröffnungsvortrag
Opening Address

GESUNDHEIT, WOHLBEFINDEN UND LEISTUNGSFÄHIGKEIT DER SPORTTREIBENDEN ALS GEGENSTAND DER SPORTPSYCHOLOGIE

PAUL KUNATH, DEUTSCHLAND

Der Mensch der Gegenwart bedarf in allen Ländern und Kulturen für seine Individualentwicklung in Abhängigkeit von seinen soziokulturellen Lebensbedingungen des Erkenntnissystems der Wissenschaft. Psychologische Erkenntnisse spielen dabei eine zunehmend größere Rolle.

Das Erkenntnissystem der Psychologie ist einerseits so solid und andererseits so breit geworden, daß es die vielfältige Verflochtenheit individueller und sozialer Lebensprozesse in Abhängigkeit von psychischen Regulationsvoraussetzungen immer komplexer erfaßt und verstehbar machen kann. Die sportliche Betätigung oder gelenkte körperlich-sportliche Bewegung wird für die Vorbereitung des Menschen auf ein glückliches, gesundes und freudvolles Leben sowie im Ringen um die Milderung oder Begrenzung von Behinderungen und Erkrankungen für den einzelnen an Bedeutung zunehmen. Sportliches und prophylaktisches bzw. therapeutisches Bewegungsgut wird dann der Stabilisierung der Gesundheit, dem psychophysischen Wohlbefinden bzw. der Lebensfreude und der Leistungsfähigkeit einschließlich der sportlichen Talententwicklung dienen, wenn Einseitigkeiten der körperlichen, psychischen und sozialen Belastungen vermieden werden.

Die psychischen Regulationsprozesse und -qualitäten bilden die wesentlichen Vermittlungsglieder zwischen dem individuellen biotischen System und den gegebenen sozialen Lebensbedingungen. Sie entscheiden deshalb ebenso wie biotische und soziale Systembedingungen über die Nützlichkeit der Sport- und Bewegungstätigkeit für das Glück des Menschen.

Der VIII. Kongreß der FEPSAC - Aufgaben und Probleme

Die alle 4 Jahre stattfindenden FEPSAC-Kongresse versuchen Antworten auf die folgenden Fragen zu geben:

- Was gibt es Neues in der Sportpsychologie?
- Welche Tendenzen der Wissenschaftsentwicklung sind erkennbar?
- Welche Einschätzungen und Erkenntnisse haben sich bewährt, welche sind Alltagsauffassungen geblieben?

- Was geschieht eigentlich mit dem rasch wachsenden Datenmaterial für die Erarbeitung theoretischer Konzeptionen?

Natürlich interessieren auch einfach neue Gesichter, neue Projekte und eventuell neue Zentren auf dem Gebiet der sportpsychologischen Arbeit.

Die Anerkennung der sportpsychologischen Erkenntnisse durch die Praxis, die Praktiker der verschiedensten Bereiche des Sports und der Bewegungskultur ist ständig neu abzuschätzen. Für Psychologen eigentlich selbstverständlich ist die Annahme der Resultate der psychologischen Arbeit durch den Sportler, den sporttreibenden Menschen oder den für den Sport zu gewinnenden Menschen (Alte und Junge, Männer und Frauen, Profis und Wohlbefinden suchende Alltagsmenschen).

Versuchen wir, einige Antworten auf die aufgeworfenen Fragen und Problemkreise zu finden.

Beginnen wir mit der Feststellung: Die Sportpsychologie als Wissenschaftsdisziplin der Psychologie und der Sportwissenschaft hat ihre Gegenstände und Arbeitsfelder stärker profiliert und spezifiziert. Das ist in den Ländern unterschiedlich feststellbar. Die internationalen Organisationen (auch FEPSAC und ISSP) haben dazu einen Beitrag geleistet.

Gegenwärtig wird die Sportpsychologie über ihre bisherige Partnerschaft für den Wettkampfsport hinaus vor allem mit Fragen der menschlichen Gesundheit, des Wohlbefindens und des neuen Körperbewußtseins konfrontiert. Damit überschreitet sie die Grenzen ihrer traditionellen Verflechtungen mit dem Wettkampfsport sowie der Effektivierung des Übens und Trainierens. Sie lenkt ihre Arbeit stärker auf das Subjekt aller Arten des Sporttreibens, den individuellen Lebensvollzug Gesunder und Behinderter, talentierter und leistungs- bzw. bewegungsschwacher Personen.

Der Sport braucht zwar weiterhin die Sportpsychologie bisheriger Prägung, noch mehr braucht er aber neue Konzeptionen dieser Disziplin, die darüber hinaus weisen. Das ist nicht einfach durch eine Umbewertung oder Nutzung bisheriger Erkenntnisse und Verfahren zu leisten. Dazu bedarf es neuer Selbstbesinnung und -bestimmung.

In der Gegenwart entdecken viele Menschen die Notwendigkeit, zu ihrem Körper ein neues Verhältnis herzustellen. Offenbar haben Zivilisation und vor allem der weltweite technische Fortschritt nicht nur die Natur unverantwortlich vernachlässigt, sondern auch dazu beigetragen, daß die Menschen insgesamt, und mehr oder weniger auch jeder einzelne, ihre eigene Natur, ihren Körper, nur noch ernst nehmen, wenn er nicht mehr so mitmacht, wie seine Besitzer es wollen. Streß und Unwohlsein, schnelles Ermüden, geringe Leistungsfähigkeit oder Krankheiten, insbesondere die Zivilisationskrankheiten, zeigen an: da ist noch etwas, was nicht gebührend beachtet wurde. Den psychischen Komponenten dieses Sachverhaltes hat

sich die Psychologie, darunter auch die Sportpsychologie, neu zu stellen.

Sport trifft den ganzen Menschen

Das Wesen des Menschen als psychisch vermittelte vergesellschaftete Natur wird in allen seinen Tätigkeiten, also auch im Sport, sichtbar und ausgeformt. Da der einzelne Mensch stets nur unter historisch-konkreten Lebensbedingungen tätig wird bzw. werden kann, haben diese Betätigungen, ihr Inhalt, die Art und Weise ihrer Ausübung und ihr sozialer Kontext, einen entscheidenden Einfluß auf seine Selbstentwicklung und seine Sozialisation (Vergesellschaftung).

Das Sportsystem einer Gesellschaft gehört zu den historisch-konkreten Lebensbedingungen für die Menschen. Seine Bedeutung für die Individualentwicklung kann darin gesehen werden, daß der Mensch in seinen Tätigkeiten auch eine Beziehung zu jenen Erscheinungen herstellt, die ihm auf dem Gebiet von Körperkultur und Sport begegnen.

Dieses "Sich-in-Beziehung-setzen" kann aktiv, rezeptiv-beschaulich oder auch ablehnend sein. Entsprechend wird der Sport in seinen Tätigkeiten (Untätigkeiten) für ihn entwicklungswirksam. Er trifft biotische, psychische oder soziale Komponenten seines Seins zentral oder peripher bzw. löst Wechselwirkungen aller drei Komponenten im Prozeß individueller Selbstverwirklichung aus, die auch seine sozialen Beziehungen bewertbar machen.

Sport, was immer man darunter verstehen will, ist in der modernen Welt eine Bezugsgröße im Leben des einzelnen, die nicht einfach weggedacht werden kann.

Psychisches als Voraussetzung und Resultat des Sporttreibens

Wir heben nochmals hervor, das Soziale, die gesellschaftlichen Ideen, Ziele, Organisationsformen, materiell-technischen Bedingungen oder auch der vorhandene Wissensschatz über sportliches Üben und Trainieren sind notwendige und wichtige Voraussetzungen für das Sporttreiben der Bürger eines Staates. Für den einzelnen werden sie nur wirksam über

- seine eigenen Ziele, Absichten und Motive, sich sportlich zu betätigen,
- die beim Sporttreiben erlebte Befriedigung durch körperliche Anstrengungen bzw. bei der Bewältigung von Erfolgs- und/oder Mißerfolgserlebnissen,
- geistige Programme, die ihm zur situationsgerechten und subjektgemäßen Anforderungsbewältigung zur Verfügung stehen und nicht zuletzt

- die mit dem Sporttreiben verbundene ästhetische Zufriedenheit sowie eine entsprechende Geselligkeit und Kommunikation mit Gleichgesinnten.

Da die psychischen Abbilder (z.B. das Wissen), Prozesse, Funktionen, Eigenschaften und Zustände nicht nur die individuelle Brechung des Sportsystems und seines Funktionierens kennzeichnen, sondern auch die körperlichen Eigenschaften und Zustände auf diese psychische Widerspiegelung und Regulation der Hin- und Abwendung des einzelnen zum bzw. vom Sport Einfluß haben, ist eine Auffassung vom Sport als Bewegungs- bzw. Funktionstraining eine unzulässige Vereinfachung und Verengung. Gesundheit als psychophysisches Wohlbefinden wird damit nicht ausreichend getroffen.

Wissen über Üben und Trainieren ist Bestandteil der Alltags- und Gesundheitskultur

Jeder Mensch, der sportliche Übungen ausführt, benötigt dazu ein bestimmtes Maß an Wissen über die auszuführenden Handlungen und Bewegungen bis hin zu Regel- oder Verhaltenskenntnissen. Das ist eine allseits anerkannte Feststellung. Auf die folgenden Fragen gibt es aber sehr unterschiedliche Antworten:

Woher kommt dieses Wissen? Wer vermittelt es? Wie wird es Bestandteil der Alltags- oder Gesundheitskultur des einzelnen bzw. sozialer Gruppen?

Vor allem mit Hilfe seines Wissens, sieht man von der emotionalen Hinwendung zum Sport ab, baut der einzelne seine Vorstellungen von den sportlichen Übungen und Bewegungen auf, die er realisieren will und von denen er annimmt, daß sie ihm nützen. Das Wissen geht auch in seine Wahrnehmungsfähigkeit ein und fördert die Erfassung der jeweiligen Situationen als auch die Bewertung der Wirkungen der augenblicklich gegebenen Umgebungsbedingungen für seine sportliche Betätigung.

Auch eigene Körperzustände sowie gelungene oder fehlerhafte Übungsausführungen werden wahrgenommen und geistig verarbeitet. Dadurch gelingt es, die Körperübungen anforderungsgerecht und subjektangemessen auszuführen bzw. auch zu bewerten. Kurz gesagt: Psychische Inhalte, Prozesse und Eigenschaften sowie aktuelle psychophysische Zustände sind für jede sportliche Betätigung notwendiger Bestandteil.

Sie werden für sportliches Üben und Trainieren bzw. im sportlichen Wettkampf gebraucht und, indem sie gebraucht werden, werden sie auch entwickelt bzw. erweitert, verfeinert und geschärft.

Das Wissen, d.h. die psychischen Inhalte oder Abbilder, ist dabei ein notwendiger Bestandteil für sportliche Betätigungen in Inhalt und Intensität. Hinreichend für stabiles Verhalten zum sportlichen Tun ist es aber nicht. Das soziale Umfeld und

die Emotionen, d.h. das gesamte "Situationserleben" beim Sporttreiben, festigen oder labilisieren die Zu- oder Abwendung gegenüber sportlichen Anforderungen.

Die Gesundheit des einzelnen verlangt indidviduumsgemäßes Sporttreiben

Ausgehend davon, daß der dargestellte Zusammenhang richtig ist, führt jedes Sporttreiben zur Ausbildung psychischer Inhalte, Prozesse und Eigenschaften bzw. zur Beherrschung psychischer Zustände. Allerdings ist damit noch nichts über die Qualität bzw. Niveaustufen der psychischen Widerspiegelungs- und Regulationsfunktionen ausgesagt. Auch die Frage nach der Übertragbarkeit im Sport erworbener Fähigkeiten und psychischer Qualitäten individuellen Verhaltens ist damit nicht beantwortet.

Jede vereinfachte Darstellung des wechselseitigen Zusammenhangs von Sport und Individualentwicklung bzw. -befinden, so gut sie für das Sportsystem eines Staates auch gemeint sein mag, ist abzulehnen. "Wer Sport treibt, bleibt gesund oder wird gesünder", ist nur bedingt richtig. Gültig sind die Aussagen nur, wenn für den einzelnen und vom einzelnen das ihm gemäße sportliche Betätigungsfeld nach Inhalt, Umfang und Intensität getroffen bzw. gefunden wird. Dazu hat die Sportwissenschaft als Ganzes einen notwendigen Beitrag zu leisten. Weder eine Gesellschaft noch der einzelne kann dabei allein gelassen oder ausschließlich der Empirie - Versuch und Irrtum - ausgesetzt werden.

Sportwissenschaft ist demzufolge notwendig. Ihre historische Entstehung ist nicht einfach erklärt mit dem Beispiel großer Staatsmänner oder hervorragender Wissenschaftler, die selbst aktiv Sport trieben oder die den Sport für das soziale Leben förderten bzw. unterstützten. Die Sportwissenschaft ist auszubauen und in ihren Disziplinen bzw. differenzierbaren Gegenständen weiter durchzustrukturieren, um die Dominanz von Aussagen einzelner Disziplinen für das praktische Üben und Trainieren einzuschränken oder durchschaubar zu machen. Sport ist ein sehr sensibles Feld individueller Lebensverwirklichung bzw. Gesundheits- und Wohlbefindensentwicklung. Die Ausbildung der psychischen Regulationsfähigkeit und die Beherrschung psychophysischer Zustände, die in komplexen sportlichen Anforderungssituationen in spezifischer Weise erfolgt bzw. erfolgen kann, führt für viele Menschen nicht selten zu einem echten Lebensgewinn. Warum kann das angenommen werden? Weil die im Sport erworbenen psychischen Regulationsqualitäten, beispielsweise Charaktereigenschaften oder auch Wahrnehmungsfähigkeiten, Angstkontrolltechniken zur Beherrschung negativer Emotionen, Strukturierenkönnen von Aufgaben und Situationen zu ihrer Bewältigung u.a. nicht selten stabilere und allgemeinere Handlungsfähigkeiten oder -strategien enthalten. Sie reichen oftmals über den Sport hinaus und sind für die Gesundheit des einzelnen sehr wert-

volle Voraussetzungen, um mit vielfältigen und unterschiedlichen Lebensumständen besser fertig zu werden. In diesem Sinne kann der Sport auch einen nicht hoch genug einzuschätzenden Beitrag für die gesamte Persönlichkeitsentwicklung leisten, vor allem dann, wenn mit dem Sporttreiben in frühen Kinderjahren begonnen wird und der Heranwachsende dabei viele positive Erlebnisse sammeln kann bzw. eine altersgemäße Bedürfnisbefriedigung erlebt.

Wenn in verschiedenen Veröffentlichungen, vor allem von Medizinern und Ärzten, von der Wahrung der Gesundheit gesprochen wird, so möchte ich gern deutlich machen, daß zumindest aus psychologischer Sicht Gesundheit kein Zustand ist, sondern nur in Bewegung existiert, auch sportlicher Bewegung. Für einen Menschen z.B., der sportlich aktiv war, bedeutet der Entzug von Bewegung Einschränkung der Gesundheit. Max Bürger hat als Internist in den 20er Jahren in Leipzig in der Inneren Medizin einer aktiven Therapie das Wort geredet und entsprechend erfolgreich praktiziert. Er ging damit ganz grundsätzlich anders auf den kranken Menschen zu. Eine aktive Therapie setzt sich seitdem immer wirkungsvoller, wenn auch sehr langsam, durch. Daß damit der Sport auch tatsächlich Gesundheit und Wohlbefinden des einzelnen trifft, ist allerdings kaum herausgearbeitet und bisher nur Auffassung einiger weniger Sportpsychologen.

Gute Trainer, Übungsleiter, Sporttherapeuten und Sportlehrer wissen heute oder verstehen es zumindest immer besser, die psychischen Fähigkeiten zur Regulation aktueller Zustände bzw. zur Bewältigung bestimmter, manchmal auch unvorhergesehener Situationen, im gesamten Training und nicht vorrangig durch zusätzliche psychologische Trainingseinheiten oder eine trainingsunabhängige psychologische Betreuung der Sportler (Coaching) auszubilden.

Die psychologische Sicht zur weiteren Aufhellung der Wechselbeziehungen von Sport und der psychophysischen Ganzheit Gesundheit

Durch eine konsequentere und komplexere Ausarbeitung bzw. Nutzung des Tätigkeitsprinzips der von Wygotzki (1985, 1987) und Lurija (1982) begründeten kulturhistorischen Schule der Psychologie wurden in der Sportpsychologie in Verbindung mit handlungstheoretischen Ansätzen im letzten Jahrzehnt Fortschritte erreicht, die es gestatten, wesentliche Abhängigkeiten bzw. Wechselwirkungen zwischen Sport, Bewegung und Gesundheit tiefer zu erfassen. Ich bin sehr froh, daß diese Tendenz weltweit sichtbar ist. Wenn ich recht sehe, waren etwa 40% der Beiträge auf dem VII. Kongreß der ISSP 1989 in Singapore, dieser Thematik gewidmet. Was besagt diese Konzeption:

- Durch sportliches Üben und Trainieren oder auch sporttherapeutische Betätigun-

gen können die dabei ausgebildeten oder genutzten biotischen Anlagen und Funktionen für sportliche Leistungen oder gewünschtes Wohlbefinden bzw. für Gesundheitseffekte nur dann optimal zur Wirkung gebracht werden, wenn sie nicht durch psychische Regulationsqualitäten, etwa Angst, fehlerhafte Wahrnehmungen, mangelnde Selbstsicherheit oder falsche Entscheidungen begrenzt oder fehlgeleitet werden.

- Soziale Bedingungen des Übungs- und Trainingsbetriebes, materielle wie ideelle, gehen nicht direkt, unvermittelt in sportliche Betätigungen des einzelnen ein. Wenn z.B. ein Sporttreibender spürt, daß er eine Übung nicht ausführen kann, weil ihm Fähigkeiten und Erfahrungen fehlen, nützen die schönsten Hallen, besten Geräte und das gute Zureden des Übungsleiters wenig, meist nichts. Fühlt sich der Sportler trotzdem angestachelt, aufgefordert oder auch nur gedrängt, die Übung "irgendwie" auszuführen, so ist seine Gesundheit oder auch seine emotionale Zufriedenheit oftmals, vor allem auf lange Sicht, ernsthaft gefährdet.

In dieser Beziehung werden oftmals auch völlig sinnwidrige Auffassungen über den Hochleistungssport verbreitet. Es sind nicht vordergründig die günstigen Bedingungen für den Spitzensport, die zu so zahlreichen hohen Leistungen im Sport führen. Es ist vielmehr der Mensch, der Sportler, insbesondere der jüngere, der deshalb hohe Leistungen erreicht, weil er sich mit seinen Fähigkeiten und Neigungen entsprechend einbringen kann und in den Grenzen der zu bewältigenden Anforderungen gelernt hat, auszuwählen, was, wie oft und mit welcher Intensität er z.B. eine Übung oder einen Übungsteil ausführen will. Wie immer diese Aussagen anerkannt werden, wir Psychologen haben die Erfahrung gesammelt, daß nur der Sportler zu höchsten Leistungen fähig war und ist, der sein Leben auf diese Leistung eingestellt hat und diese Leistung, mit all ihren schwierigen Einzelschritten, auch tatsächlich erreichen will. Unter Druck und Zwang kann niemand schadlos, auch außerhalb des Sports, hohe Leistungen erreichen. Ergo: Auch das Soziale wird vor allem über die psychischen Inhalte, Prozesse, Eigenschaften und Zustände wirksam, die der Sporttreibende davon "in seinem Kopf" hat und die er zur Regulation seiner Tätigkeiten bzw. Übungen auch einsetzen kann bzw. gelernt hat zu nutzen. Wie viele haben unter besten sozialen Bedingungen in ihrem Leben nur "Mittelmaß" produziert. Wie viele sind aber, oft aus schlechten sozialen Verhältnissen kommend oder in solchen lebend, sehr oft über sich hinausgewachsen. Sie erleben nicht selten deshalb ihre Leistungen viel stärker, weil die soziale Rückwirkung, "das hatten wir ihm gar nicht zugetraut", von ihnen viel tiefer erlebt wird. Auf unser Thema bezogen könnten wir festhalten: Armut muß nicht krank machen! Armut oder schlechte soziale Bedingungen für das Sporttreiben - von materiellen bis zur mangelhaften Übungsleitertätigkeit - können individuelles Handeln einschränken oder behindern. Oftmals können sie auch verhindern, daß bestimmte

Tätigkeiten überhaupt ausgeübt werden. Soziale Bedingungen können aber nie die volle oder nur geringe Ausschöpfung der individuellen Lebensbedingungen erklären. Letztes Verständnis dafür finden wir vor allem in der psychischen Struktur und Funktion der Individuen. Wer über Sport und Gesundheit nachdenkt, kann daran nicht vorbeigehen. Auch der Spitzensport muß nicht krank machen, wenn Wissenschaft und Übungsleiter/Trainer den Sportler an seine Leistungsgrenzen heranführen bzw. sich bemühen, sie mit ihm aufzuspüren. In dieser Beziehung ist auch der professionelle Sport nicht einfach zu verketzern.

- Das Psychische des Menschen rückt mit derartigen Standpunkten nicht in eine dominierende Funktion im Sport. Vielleicht kann aber so der humanistische Auftrag des Sports besser oder deutlicher erfaßt und sein Mißbrauch gegenüber dem einzelnen eingeschränkt bzw. ganz verhindert werden. Das fordert der Mensch vom Sport 2000! Wer mit dem Sport dem einzelnen zu seiner Selbstverwirklichung oder auch "nur" zu Gesundheit und Wohlbefinden verhelfen will, der kann einfach nicht mehr psychische Funktionen und Funktionsweisen geringschätzen bzw. in seiner praktischen Tätigkeit vernachlässigen.

- Bleibt uns noch ein Gedanke, der hervorhebenswert erscheint. Die psychische Widerspiegelungs- und Regulationsfunktion kann auf die biotischen, natürlichen Grundlagen menschlicher Existenz nicht verzichten, ist sie doch selbst an das menschliche Gehirn, dem höchst entwickelten "biotischen Apparat" und seine relativ eigenständige Gesetzmäßigkeit gebunden. Psychisches kann an biotischen Strukturen, Verflechtungen und Gesetzmäßigkeiten, vor allem der höheren Nerventätigkeit, ebenso wenig vorbei wie an sozialen Ideen, Zielen und Bedingungen, die es widerspiegelnd in individuelles Handeln einbringt. Darin sehe ich aus psychologischer Sicht etwas Spezifisches des Sports, nach dem eingangs unseres Kongresses zu fragen ist.

Vielleicht kann mit solchen Erkenntnissen auch ein neues Verständnis des Gesundheitsbegriffes durch uns Psychologen gefördert werden. Der neu formulierte Begriff der "psychischen" Gesundheit wird ohnehin nur sinnvoll und verständlich im Zusammenhang mit "physischer" Gesundheit, und umgekehrt ist nicht jeder, der frei von biotischen Erkrankungen ist bzw. zum augenblicklichen Zeitpunkt scheint, wirklich gesund.

Psychologie und Sportwissenschaft

Gesundheit durch Sport bis zum Jahre 2000 verlangt von der Sportwissenschaft nicht nur Anmerkungen zu Auswüchsen des Spitzensports, vor allem im Kinder- und Jugendalter oder zur Verwissenschaftlichung des Sporttreibens infolge des

Einsatzes quantifizierender Meßverfahren. Die Verknüpfung von Sporttreiben und individuellem Wohlbefinden verlangt erweitertes, oftmals ganz neues konzeptionelles, humanwissenschaftliches Denken. Eine komplexe Theorie des Sports ist notwendig. Sie kann nur Produkt einer vielseitigen Gemeinschaftsarbeit sein, in der die Psychologen eine wichtige Arbeit zu leisten haben. Die Sportwissenschaft hat in den letzten Jahrzehnten sehr viele spezielle Erkenntnisse erarbeitet. Es fehlt jedoch an einer integrativen Theorie des Sports genauso wie an theoretischen Konzeptionen der Sportpsychologie. Sportliches Üben und Trainieren, sportliches Therapieren und auch die sportliche Wettkampftätigkeit sind stärker oder in nächster Zeit vorrangig in der Dialektik biotischer, psychischer und sozialer Integrationslinien zu erfassen und darzustellen. Der Praktiker wird davon profitieren und von Einseitigkeiten stärker abgehalten. Befürchtungen gegenüber der Sportwissenschaft, daß sie einem Leistungsfetischismus huldige, könnten so abgebaut oder "ins rechte Licht" gesetzt werden.

Das Sportsystem bzw. die Sportkultur einer Gesellschaft ist entstanden als ein spezifisches System der Bewegungskultur wie der Lebens- und Gesundheitskultur des Menschen. Seine Verflechtungen mit der Arbeitskultur sind nicht nur in der Urgeschichte zu erkennen und erfahren gegenwärtig mit dem Wachsen des professionellen Sports neue Konturen, stellen wir die Gesundheit, das Lebensglück und psychophysisches Wohlbefinden des einzelnen in den Mittelpunkt der Betrachtungen zur Funktion des Sports im Leben des Menschen. Sportliches Üben wird in der Gegenwart eher anforderungsgerecht gestaltet als individuumsangemessen. Die Sportwissenschaft, auch die Sportpsychologie, hat in außerordentlich diffiziler Spezialistenarbeit unerhört viele Einzelerkenntnisse für die Verbesserung einzelner Leistungs- oder Bewegungsparameter hervorgebracht, ist aber erst anfänglich dabei, das Wesen des Sports für die menschliche Existenz und vor allem für die Individualentwicklung und das -befinden zu bearbeiten und zu verstehen. Soll Sport der Gesamtentwicklung des Einzelwesens dienen, seine allgemeine Leistungsfähigkeit, nicht nur die spezifisch sportliche, mit ausbilden helfen, seine Gesundheit stabilisieren und seine Lebens- und Genußfähigkeit fördern, so ist ihm durch eine komplexe integrative Theorie, die als humanwissenschaftliches Teilgebiet der Natur- und Kulturgeschichte des Menschen verstanden werden kann, ein angemessener Platz im Leben des einzelnen und der Gesellschaft zu sichern. Sportkonzeptionen, die auf das Jahr 2000 weisen wollen, können nur auf die Ansätze einer Sporttheorie zurückgreifen. Sie sind aber in jedem Fall praktisch nur wirksam, wenn sie Lebensfreude, Wohlbefinden und Gesundheit des einzelnen anzielen, weil davon ausgehend auch eine Gesundung eines gesamten sozialen Organismus, in dem Individuen ihre Einzelentwicklung realisieren, erwartet werden kann.

Die Beziehung zwischen Sport und individueller Gesundheit, Leistungsfähigkeit und Lebensglück zu projizieren, könnte von der im Vortrag dargestellten Denkweise, sportliches Üben und Trainieren sowie sportliche Therapieformen als spezi-

fische Formen menschlicher Tätigkeiten zu betrachten, dann einen Gewinn erwarten lassen, wenn das Subjekt der sportlichen Tätigkeit als naturgeschichtliches Wesen verstanden wird oder (in einer Konstruktbildung) als biopsychosoziale Einheit Beachtung findet. So gesehen könnte sportliches Üben und Trainieren, einschließlich der Nutzung sportlicher Therapieformen, einen Beitrag zur individuellen Handlungsfähigkeit, zu Handlungszuverlässigkeit und zu sozialer Verantwortlichkeit individuellen Handelns leisten. Diese Merkmale kennzeichnen wichtige übergreifende Funktionen des Sports und sind gleichzeitig Gegenstand der Sportpsychologie. Über eine durch das Individuum gewählte sportliche Betätigung kann zu Handlungszufriedenheit als Ergebnis sportlicher Übungen beigetragen werden, die ein wesentlicher Bestandteil psychophysischer Gesundheit ist und nur durch "ständiges Bewegen", auch sportliches, hergestellt werden kann.

Einige Arbeitsstandpunkte zu gegenwärtigen Positionen der Sportpsychologie

1. Der Zusammenhang von Gesundheit, Wohlbefinden und Leistungsfähigkeit kann nicht geklärt werden durch die bloße Darstellung oder Wiederholung von Daten oder Fakten. Damit bleibt man in der Gegenwart stehen. "Aus keinem dieser Fakten können wir ableiten, was Zukunft bedeutet. Im Gegenteil, diese Fakten machen uns hilflos. Denn es kann ja doch wohl nicht sein, etwa ein Risikofaktorenmodell vor dem Menschen aufzubauen, das ihm Angst vor seinem künftigen Leben macht. D.h., irgendwo haben wir das Gefühl, es muß doch eine Zukunft von Humanität, von menschenwürdigem Leben geben, in die diese Daten sich einreihen. Selbstverständlich haben diese Daten ihren Wert. Sie führen uns als über künstliche Sinnesorgane wahrgenommene Inhalte vieles vor Augen, was wir mit unseren natürlichen Sinnesorganen nicht sehen können. Aber sie nehmen uns natürlich nicht das Denken ab! Genausowenig wie der optische oder akustische Eindruck, den ich gewinne, mir das Denken darüber abnimmt, wozu und wohin ich tätig bin" (vgl. Jantzen, Referat auf dem Bremer Kongreß "Gesundheit und Bewegung", 1990).

Sportpsychologie ist wieder oder überhaupt erst richtig als Wissenschaft vom Subjekt der sportlichen Tätigkeit zu konstituieren und nicht vorrangig oder ausschließlich als "Psychologie der Tätigkeit" zu betreiben.

2. Damit fällt das Problem der ethischen Verpflichtung der Arbeit des Sportpsychologen zusammen.

- Bestimmte Arten des naturwissenschaftlichen Denkens führen vom Menschen weg, wenn wir im Experiment nur Daten gewinnen, die Funktionsänderungen oder Verbesserungen zur Anforderungbewältigung nachweisbar machen, aber

nicht gleichzeitig nach deren Nutzen für den einzelnen Menschen fragen. Manche Verbesserung psychischer Funktionen kann auch dem Individuum und seiner Entwicklung schaden. Vergessen wir nicht, das zu bedenken.

- Psychologisches Doping "ist" angesichts der biologischen Dopingfälle gefragt, weil es noch nicht nachweisbar ist. Wer stellt sich diesem pragmatischen Ansinnen einer schlechten Praxis? Sportpsychologen sollten das prinzipiell ablehnen. Halten wir es lieber mit der Auffassung, "Selbstverantwortung oder Eigenständigkeit der psychischen Regulation des Handelns der Sportler" ausbilden zu helfen. Jeden für die Folgen seines Tuns verantwortlich zu machen, bleibt ein moralischer Appell, solange der einzelne nicht befähigt wird, das auch unter seinen realen Lebensumständen realisieren zu können. Sportpsychologie hat in dieser Beziehung ihre ethischen Grenzen deutlich zu formulieren.

3. Sportpsychologen wenden sich verstärkt Behinderten zu, auch solchen, die unter Medikamenten stehen. Was wissen wir darüber, was passiert, wenn plötzlich verstärkte körperliche Aktivität von ihnen gefordert wird? Zu wenig, um bedenkenlos auch für diese Gruppe von Menschen sportliche Übungen als Möglichkeit zur Verbesserung ihrer Lebensqualität zu fordern. Weniger ist vor allem in diesem Feld ofmals mehr! Kooperation mit Psychotherapie in Kliniken ist auf- bzw. auszubauen.

4. Körpererfahrung, Körperselbstbild, Körperbewußtsein ist gegenwärtig ein Feld, das der Psychologie über die Sportpsychologie erschlossen werden kann. Der Körper eines Menschen ist immer sein Körper. Er kann diesen zum Gegenstand seiner Selbstbetrachtung machen oder gering schätzen, ich sagte es eingangs dieses Beitrages. Als Gegenstand des Reflektierens über ihn ist er ein Sachbezug der Psychologie. Psychologen sollten deshalb nicht nur warnen vor "Körpertechniken", sondern helfen, Menschen zum Umgang mit ihrem Körper zu befähigen.

5. Schließlich hat die Psychologie aus Verantwortung für den einzelnen, als Subjektwissenschaft, Sport in Maßen, d.h. individuellen Maßen, zu fordern und zu fördern. Das verlangt z. B. psychologische Standpunkte zu Normen und Normativen, bis zur Schulzensur oder Trainingskennziffer in die öffentliche Diskussion einzubringen. Zu wenig haben wir uns bisher dazu geäußert, weltweit!

Die Sportpsychologie sollte die Therapiepositionen von der Psychoanalyse über die Sozialpsychologie bis zur Handlungs- und Persönlichkeitspsychologie in ihr Denkgebäude einbeziehen und in ihren Leitbegriffen bzw. Grund- oder Basisbegriffen gegenstandsgerecht aufnehmen.

Lassen Sie mich mit einem Bekenntnis schließen: Unser Organismus ist die biotische Basis unseres individuellen Seins. Unsere Individualität ist ein System von Bewegungen, körperlichen wie geistigen, moralischen wie ästhetischen, kognitiven

wie emotionalen. Der Mensch als biopsychosoziale Einheit existiert nur in Bewegung. So ist er angelegt. Verhelfen wir Sportpsychologen durch unsere wissenschaftliche wie praktische Arbeit ihm zu individuell sinnvollen "Bewegungen"; auch sportliche gehören dazu. Die Menschen, der Sport und vor allem die Sportler werden den Nutzen der Sportpsychologie auf diese Weise immer besser verstehen und dankbarer die Ergebnisse unserer Arbeit erwarten.

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2

Allgemeine Aspekte der Sportmotivation

General Aspects of Sport Motivation

KEY INGREDIENTS TO COMMITMENT IN SPORT[1]

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In discussing key ingredients to commitment in sport, three important motivational issues are addressed in this paper. First, what reasons do athletes give for participating and dropping out of sport? Second, what makes athletes committed to sport? Finally, what makes sport enjoyable to athletes? The focus will be on non-elite athletes 8 to 19 years of age involved in school and agency sponsored sports.

Participation Motivation

The reasons athletes give for participating and dropping out of sport have received extensive research attention over the past decade under the general rubric of participation motivation. This research has generated a wealth of descriptive data. Drawing on excellent reviews of this literature (see Gould, 1987; Gould & Petlichkoff, 1988; Weiss & Petlichkoff, 1989), the reasons athletes give for participating and dropping out are multiple and diverse. Weiss and Petlichkoff (1989) categorized the major motives for participation into "competence (e.g., learn and improve skills), affiliation (e.g., make friends, be part of a team), fitness (e.g., be physically active, get in shape), and fun" (p. 195). They summarized the major reasons for dropping out as conflicts of interest, lack of playing time, lack of success or skill improvement, competitive stress, disliking the coach, boredom, injury, and a lack of fun.

This descriptive research, while providing a wealth of information, does not address the underlying processes of participation. An important goal of our research programme at the UCLA Sport Psychology Laboratory, was to build on this rich data base and develop a theoretical approach to better understand the processes underlying participation in sport.

A Model of Sport Commitment

We choose to examine one aspect of participation, namely, why athletes continue participating in a chosen sport. After carefully examining the general social

[1] This research was supported by a contract from the Amateur Athletic Foundation of Los Angeles to Tara K. Scanlan. Thanks are extended to Alvin Lamarre for his help in editing earlier versions of this manuscript. The statistical assistance of Mary Collins and Marci Lobel also is gratefully acknowledged.

psychological (e.g., Kelley, 1983; Rusbult, 1980) and organizational psychology (e.g., Farrell & Rusbult, 1981) literatures, we decided the construct of commitment was ideally suited to addressing this issue. Commitment is generally viewed as reflecting persistence in a course of action (Becker, 1960; Kelley, 1983). Building on Caryl Rusbult's research, the theorizing of Harold Kelley, and the rich sport psychology data base, we developed a model of sport commitment (see Figure 1). This model, while grounded in social and organizational psychology, represents a sport specific conceptualization of commitment.

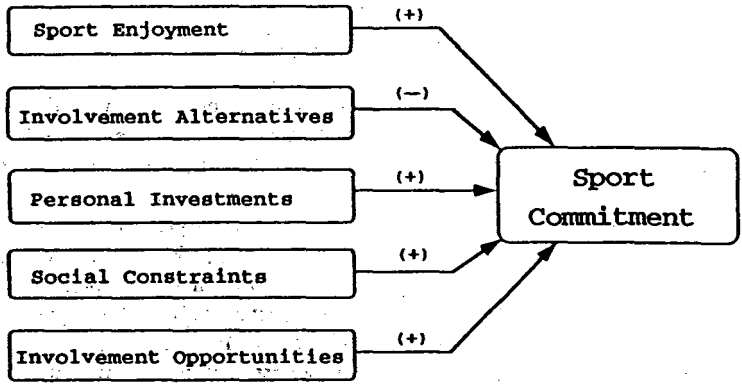


Figure 1. The Sport Commitment Model.

We defined *sport commitment* as "a psychological construct representing the desire and resolve to continue participating in sport" (Scanlan, Simons, Schmidt, Carpenter & Keeler, 1992, p. 7). Commitment can be addressed at several levels, for example, to a particular programme, to a particular type of sport or to sport in general. In the research presented in this paper, commitment was assessed at the sport programme level. This was done to anchor athletes in a common sport experience that was reasonably enduring. Further assessments were made midway through a programme to ensure that the athletes had some experience with the programme. We assessed commitment using four items; how determined are you to keep playing in this programme, what would you be willing to do to keep playing in this programme, how hard would it be for you to quit this programme, and how dedicated are you to playing in this programme. Athletes rated these items on five point Likert scales with 1 representing a low rating and 5 a high rating. Using the dedicated item as an example, the foils ranged from '1=not at all dedicated'; '2=a little dedicated', '3=sort of dedicated', '4=dedicated', to '5=very dedicated'.

As Figure 1 shows, we hypothesized that sport commitment had five predictors: sport enjoyment, involvement alternatives, personal investments, social constraints, and involvement opportunities. As with the measurement of commitment, all the predictors were evaluated on five point Likert scales with 1 representing a low rating and 5 a high rating.

We defined *sport enjoyment* as a "positive affective response to the sport experience that reflects generalized feelings such as pleasure, liking, and fun" (Scanlan, Simons, Schmidt, Carpenter & Keeler, 1992, p. 8). Four items reflecting the positive outcomes associated with involvement in the programme measured this construct. Example items included, do you enjoy playing in this programme this season, and are you happy playing in this programme this season? Consistent with the participation motivation literature, we hypothesized that increased enjoyment would be related to increased sport commitment.

We defined *involvement alternatives* as "the attractiveness of the most preferred alternative(s) to continued participation in the current endeavor" (Scanlan et al., 1992, p. 9). This construct captures the degree to which athletes view competing alternative activities as more or less attractive than the current endeavor. This proved to be a difficult concept to assess with young athletes and we finally developed a single, two part item to assess this construct. First, athletes were asked to list the one thing they would most like to do but cannot, because they play in their programme. Second, the athletes rated how much they would like to do that activity instead of playing in their programme. Consistent with past research (e.g., Rusbult, 1988), we predicted that the more attractive the alternative activity, the lower the commitment to sport.

We defined *personal investments* as "personal resources that are put into the activity which cannot be recovered if participation is discontinued" (Scanlan et al., 1992, p. 9). Consistent with the psychology literature (e.g., Rusbult, 1988), we felt typical investments in youth sport included time, money, and effort. However, we did not expect the three items to always cluster together to form a scale. This is because the relative importance of these investments may vary by sport or sport programme. For example, money may not be an important expenditure in soccer, but a very important one in skating. Due to the fact that invested resources cannot be recouped if participation is discontinued, we expected that greater personal investment would promote greater sport commitment.

We defined *social constraints* as "social expectations or norms which create feelings of obligation to remain in the activity" (Scanlan et al., 1992, p. 10). This construct reflects social pressure to continue participation. It was measured by the extent to which athletes felt they had to play to please their parents or so people would not think they were quitters.

The relationship between social constraints and commitment is complex and

considered exploratory. To date, the construct of social constraints only has been examined in close relationships. These researchers (e.g., Sprecher, 1988) contend and find support for the hypothesis that increased pressure to maintain involvement leads to greater commitment. This pressure to continue is a result of the perceived negative consequences from others if the individual were to terminate his/her involvement. Drawing on past youth sport stress research, we also formulated an alternative hypothesis that we believed was more indicative of the unique nature of youth sport. In youth sport, pressure to participate can be stress-inducing (e.g., Scanlan & Lewthwaite, 1984). This aversive state of stress, and the probable undermining of personal control and self-determination that occurs as a consequence of feeling constrained, led us to think that increased social constraints would decrease sport commitment. Which hypothesis is more appropriate for youth sport is an empirical question.

We defined *involvement opportunities* as "valued opportunities that are present only through continued involvement" (Scanlan et al., 1992, p. 10). Three items measured this construct and reflected things athletes would anticipate missing if they were to cease involvement. Example items included, how much would you miss your head coach if you left the programme and how much would you miss your friends if you left the programme? We hypothesized that the greater the involvement opportunities, the greater the commitment to sport.

Measurement

A three years research effort has established that the psychometric properties of the proposed measures are sound. This process is documented in full in an article recently accepted by the *Journal of Sport and Exercise Psychology* and only will be briefly reviewed here (Simons, Scanlan, Carpenter, Schmidt & Keeler, 1992).

Our primary goal was to establish a brief set of core items to measure each of the constructs in the sport commitment model. The questions had to be comprehended by athletes as young as nine years of age from diverse socio-cultural backgrounds. Further, the items needed to be generalizable across a wide range of sports and competitive levels.

Three diverse samples were used to evaluate the psychometric properties of our measures. Sample 1 was comprised of 77 competitive club swimmers of which 34 were male and 42 were female. These swimmers were 10 to 19 years (M=13.6, SD=2.4) of age and they had been involved in the sport for about six years (M=6.1). The athletes were predominantly Caucasian (93%), with a few

Hispanic/Latino (7%) and Asian (4%) members.[2] The sample also included 63 recreational badminton players participating in an instructional programme. Thirty-eight were male and twenty-five were female. They ranged in age from 10 to 20 years (M=15.9, SD=2.6) and averaged a little under 2 years of experience (M=1.9). The badminton players were mainly Asian (81%), with some Caucasian (19%) and Hispanic/Latino (5%) athletes.

Sample 2 consisted of 178 athletes participating in a suburban Little League programme. It included 95 girls (age M=12.49, SD=1.69) playing softball and 83 boys (age M=10.78, SD=.97) playing baseball. This sample reported having about three years experience playing their sport (M=3.1, SD=2.3). The athletes were largely Caucasian (85%), with some Hispanic/Latino (21%) players.

The third sample was comprised of 1342 subjects involved in three different youth sport programmes. Overall, there were 875 males and 467 females, ranging from 9-18 years of age. The sample was ethnically diverse with 56% Caucasian, and 44% from ethnic minorities such as African-American, Asian, and Hispanic (see Figure 2). The first programme included 553 male football players competing in a highly structured, competitive league. The football players ranged in age from 10 to 15 years (M=12.3, SD=1.1) and they had been in the programme for over two years (M=2.4). They were ethnically diverse, with 44% Caucasian, 19% Hispanic/Latino, 18% Multi-ethnic, 13% African-American, and 3% Asian. The second group consisted of 616 soccer players competing in a high school soccer league. There were 322 males and 294 females. The soccer players ranged in age from 13-19 years (M=15.7, SD=1.2) and had been on the team for an average of about one-and-a-half years (M=1.4). The ethnic makeup of this group was 63% Caucasian, 22% Hispanic/Latino, 9% Multi-ethnic, 3% Asian, and 2% African-American. The third group was comprised of 173 female volleyball players competing in club programmes. The players were from 10-15 years old (M=13.0, SD=0.9) and had played for an average of less than a year (M=0.5). This group was 73% Caucasian, 21% Multi-ethnic, 4% Asian, and 1% Hispanic/Latino.

Our psychometric work was extensive and culminated in the use of structural equation modeling (see Bentler, 1986). For the sake of simplicity, only Cronbach alphas (Cronbach, 1951) are presented here to summarize the development of the measures. Table 1 reports the reliabilities across all three samples and highlights three important points. First, the reliabilities were high across each sample for sport commitment, sport enjoyment, social constraints, and involvement opportunities. Second, as expected, the personal investments of time, money, and effort did not define a scale. Hence the items were examined in twos (e.g., time

[2] Percentages for ethnicity are rounded to the nearest whole number and may not equal exactly 100 % because athletes could indicate more than one ethnic category and there was a small percentage of missing data.

and effort) or separately, depending on their salience in different athlete groups.

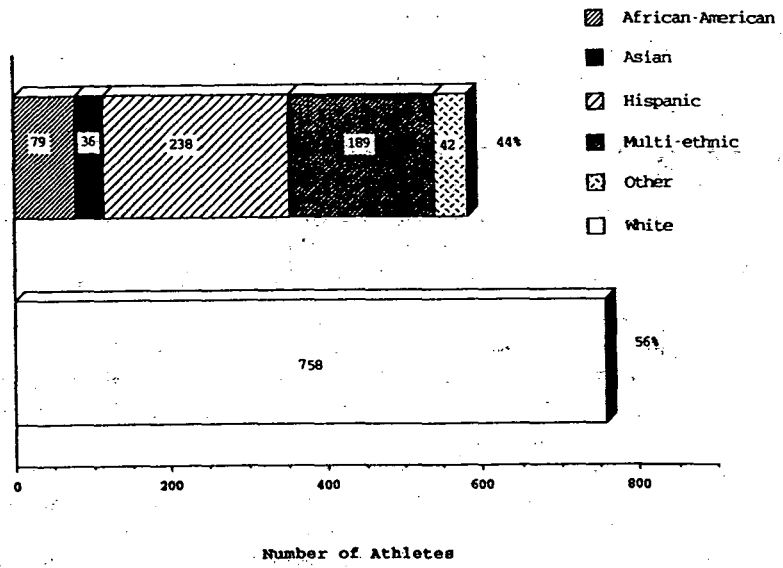


Figure 2. Ethnicity breakdown for sample 3.

The third important point to note is that the construct of involvement alternatives was found to be best measured by a single item. We initially developed multiple items to measure this construct. In our first sample, athletes were first asked to list the one activity they would most like to do but could not because they play in the (specific sport) programme. Next, the athletes rated how interesting they thought this activity would be, and how much fun they thought doing this activity would be. Upon further investigation, we determined that these questions did not adequately capture the notion of competing alternatives. In the next round of testing we added a third item which had the athletes rate how much they would like to do this activity *instead of* playing in the programme. This question seemed to better capture the notion of competing alternatives. Based on the results from this second sample, this question was the only one retained for subsequent testing.

Results from sample 3 indicated that measuring the involvement alternatives construct was still proving difficult. It is not clear whether this represents a measurement problem, an issue related to cognitive development or whether attractive alternatives are relevant to youth sport athletes. Because of these issues, the involvement alternatives construct was dropped from tests of the model with sample 3.

Table 1. Scale reliabilities for the sport commitment model constructs.

	Scale Reliabilities			
			alpha	
Scale	Sample (N)	1 (140)	2 (178)	3 (1342)
Sport Commitment		.88	.89	.82
Sport Enjoyment		.90	.95	.93
Involvement Alternatives		.91	.63	---*
Personal Investments		.36**	.50**	.39**
Social Constraints		.87	.88	.81
Involvement Opportunities		.83	.80	.76

* single item
** .77, .66 and .46, respectiveley, when money item removed

Tests of the Model

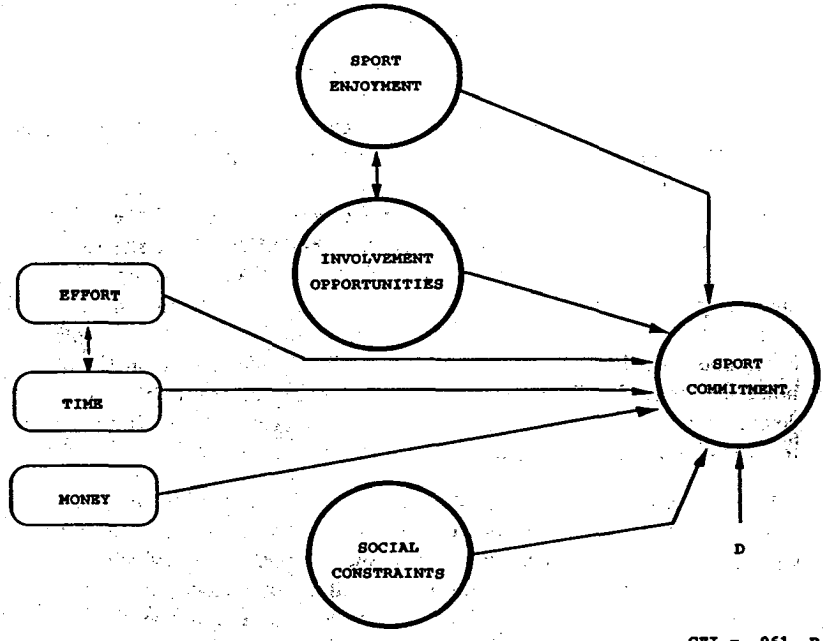
We conducted the first empirical test of the model using sample 2 (see Scanlan et al., 1992 for greater detail). Multiple regression analysis revealed that the model effectively predicted commitment, $F(5, 141)=41.34$, $p<.0001$, with the predictors of commitment accounting for 58 % of the commitment variance.[3] Significant predictors were sport enjoyment ($\beta=.57$, $p<.0001$), involment alternatives ($\beta=-.13$, $p<.05$), and personal investments ($\beta=.24$, $p<.0001$). The more the athletes enjoyed playing, the less attractive their alternatives, and the more they had invested time and effort, the greater their commitment. In this sample, social constraints and involvement opportunities did not predict commitment. Note, however, that involvement opportunities were significantly correlated to commitment ($r=.41$) and to enjoyment ($r=.53$), suggesting that it did not enter the regression because it was superceded by the enjoyment factor.

Our large, heterogeneous group of 1342 male and female athletes was used for a second test of the model. This large sample of athletes allowed the use of structural equation modeling to conduct a powerful and comprehensive test of our proposed model. This technique involves testing the validity of a model in a confirmatory, hypotheses testing manner. Further, it allows examination of complex interrelationships between predictor variables. Results from this analysis indicated that the proposed model fits the data very well (Comparative Fit Index=.961), with the determinants of commitment accounting for 67% of the commitment

[3] The items used in the multiple regression analysis for the baseball and softball players were those items retained after conducting a measurement model analysis of sample 3.

variance.

Importantly, all of the proposed determinants were significantly ($p < .05$) related to commitment in the hypothesized direction (see Figure 3). Involvement opportunities had the largest path weight to commitment ($\beta = .638$). Also strongly related to commitment was sport enjoyment ($\beta = .239$). Social constraints ($\beta = .083$) also was significantly related to commitment although its influence was not as great. In the case of personal investments, the items individually predicted commitment although they did not hold together as a scale (time $\beta = .102$, money $\beta = .045$, effort $\beta = .076$). However, effort and time were significantly correlated ($r = .321$). Also significantly correlated were involvement opportunities and sport enjoyment ($r = .561$). This finding was not surprising since we think that involvement opportunities may respresent future sources of enjoyment (see Scanlan et al., 1992).



CFI = .961, R^2 = .67

Notes: All paths are significant at the $p < .05$ level
Single headed arrows represent direct effects on commitment.
Double headed arrows represent correlations between components of the model.

Figure 3. Structural equation results for sample 3.

In summary, we appear to have a robust and generalizable model for predicting commitment to sport. The items used to measure the model's components have been found valid and reliable. The model's effectiveness has been demonstrated with a large heterogeneous sample of athletes from the sports of football, soccer, and volleyball, as well as a smaller group of baseball and softball players. Across these different samples, the model consistently accounts for large percentages of the sport commitment variance.

Sport Enjoyment

An important theme emerging from the literature and research presented above is that enjoyment is an important, positive affect that is central to motivated behaviour in sport. Enjoyment is a major reason athletes give for participating in sport and a lack of enjoyment a major reason for dropping out. Results from tests of the Sport Commitment Model show enjoyment is an important factor in maintaining the desire and resolve to continue sport participation. From an applied perspective, this is one of the greatest areas where intervention can occur. If we know the sources of enjoyment, we can better enhance this positive emotion and, in turn, commitment to sport.

Unfortunately, the current literature on the sources of enjoyment is limited. In reviewing this literature, Scanlan and Simons (1992) summarized the predictors of enjoyment to be: learning/improving skills, being with friends/being on a team, feeling competent, receiving instruction and encouragement from coaches, winning, age, and family and coach interactions and reactions. It is beyond the scope of this paper to fully document all of these predictors of enjoyment and, therefore, we will highlight two of the more complex: family and coach influences, and age. In one, family and coach influences, we see the role people important to the youth athlete play in their sport experience. In the other, age, we see a potentially disturbing trend.

In one of the few studies on enjoyment to date, Scanlan and Lewthwaite (1986) conducted a field study where they asked young wrestlers questions about theier perceptions of their parent's and coaches' actions, reactions, and interactions regarding wrestling. Factor analysis of these items revealed that three factors were predictive of seasonal enjoyment. Seasonal enjoyment was measured by a scale comprised of two items assessing how much fun the wrestlers had wrestling that season, and how much the wrestlers liked wrestling. The first factor, adult satisfaction with the season's performance, was positively related to enjoyment. The more the wrestlers felt their mom, dad, and coach were pleased with the way they wrestled, the more they enjoyed wrestling. The second factor, negative maternal interactions, was negatively related to enjoyment. The more the wrestlers

felt that their mother was upset with them when they wrestled poorly or the more they felt their mother made them uptight and nervous about their wrestling, the less they enjoyed wrestling. The last factor, positive adult involvement and interactions, was positively related to seasonal enjoyment and fell just short of significance ($p < .10$). The more fun wrestlers had going to tournaments with their parents, the more help they received from their parents, the more they liked their coach, and the more their coach tried to make them feel good when they did not wrestle well, the more they enjoyed wrestling.

In this same field study, age was significantly correlated with enjoyment ($r = .35$) and was a significant predictor in a stepwise regression ($\beta = .236$). The older the wrestlers, the less they enjoyed wrestling. If this finding is replicated, then it is imprtant to determine what makes sport less enjoyable to older, as compared to younger participants. This relationship might be key to understanding why participation in sport similarly decreases with age.

Since this project with youth sport wrestlers, we have published the results of an extensive interview study examining the sources of enjoyment in elite figure skaters (Scanlan, Stein & Ravizza, 1989). In addition, because we feel enjoyment is such an important affect to motivation in sport, we developed a comprehensive inventory of items to assess its sources. This inventory was administered as part of the sport commitment project, and has been given to the swimmers, badminton, baseball, softball, football, soccer, and volleyball players. These data are currently being analyzed.

In conclusion, if we are to more completely understand motivation in sport, and how to enhance it, we need to gain a better understanding of the role that positive affect (enjoyment as well as others) plays in the sport experience. Similarly required, is a sound understanding of the role of alternatives, social constraints, personal investments, and involvement opportunities. Based on our results to date, we end with this message. If you want athletes to have the desire and resolve to persist in their sport programme: have them enjoy it, invest in it, and value the opportunities it can afford them.

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SPORT AND EXERCISE MOTIVATION: ANTECEDENT FACTORS AND PSYCHOLOGICAL OUTCOMES OF PARTICIPATION

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This paper provides a summary of key motivational antecedents and consequences of participation in sport and exercise from a lifespan developmental perspective.

Research in exercise psychology has tended to be dominated by factors affecting adherence to exercise, and the mental health outcomes of participation in exercise (Biddle & Mutrie, 1991).

This paper will make a distinction between participation in sport and exercise. The former will refer to competitive contexts whereas exercise will be used to refer to non-competitive moderate to vigorous physical activities that are associated with the promotion or maintenance of health-related fitness or participation in health-related exercise.

Finally, in order to redress the balance of prior research, I will provide a lifespan developmental perspective by discussing factors under the separate headings of children and adults. Where research findings permit, these broad categories will be further subdivided.

Why Do People Participate?

Sport

Children

The sport experience appears to be attractive to children for one or more of the following reasons: fun and enjoyment, learning and improving skills, being with friends, success and winning, and physical fitness and health. The strength of these motives is likely to differ as a function of sport, level of participation, and developmental stage, although they do appear regularly across diverse settings and groups.

Wankel and Kriesel (1985) studied four age groups between 7-14 years and across three sports. They found that the motives were consistent across the age groups and that three categories could be identified. These were intrinsic factors, including

personal accomplishment and skill development, extrinsic factors, including winning prizes and pleasing parents and coaches, and social factors, which included being part of a team or being with friends. Intrinsic factors were rated the most important and extrinsic factors the least.

Adults

Surprisingly, less is known about why adults may take up sport. Most adult surveys adopt a broad approach and ask about participation in physical activity rather than just sport. However, the Heartbeat Wales (1987) survey did ask about incentives that were thought to be necessary to take up sport. The three main factors that would encourage those 16-24 years of age were fitness/weight loss, having more free time, and maintaining health.

Another British study investigated a more restricted type of sport participation, that of marathon running. Clough, Shepherd and Maughan (1988) investigated the reasons, given by 500 runners, for taking part in a marathon in Scotland. A factor analysis of over 70 reasons revealed the following six factors: well-being, social, challenge, status, addiction, and health fitness. The researchers highlighted the similarity of these findings to those associated with participation in other leisure pursuits, and in particular the motives of well-being, social factors, status, and challenge.

Exercise

Children

As outlined already, the data on children tend to refer to sport settings. This is natural given the greater likelihood of children, particularly younger children, to play sport if they are involved in physical activity at all. However, some data exist that point to why children and youth might also want to participate in health-related exercise beyond the competitive sport environment.

The Canada Fitness Survey (1983a) provides insight into the motivations of Canadian youth to participate in physical activity. However, no distinction was made between sport, exercise or other forms of physical activity. The results showed that from a sample of over 4,500 10-19 year olds, the major 'reasons for being active' were fun, feeling better, weight control, flexibility, and challenge. In Finland, Telema and Silvennoinen (1979) investigated the motives of over 3,000 11-19 year olds. They found that the main area of change in motivation with age occured in respect of competition and achievement. Boys and younger subjects were more interested in achieving success in competition. By late adolescence very few showed much interest in competitive success, whereas this trend was reversed for motives of relaxation and recreation - motives that might be more associated

with exercise than sport.

Adults

Rather more is known about adult involvement in exercise and their stated reasons for participation. The Canada Fitness Survey (1983b) showed that feeling better, fun, weight control, flexibility, and stress reduction were all important reasons for being active. Gender differences were not great although women were more likely to state weight control as a reason than men. However, the same survey also showed that physical activity was rated as less important to health than adequate sleep, gold diet, medical/dental care, non-smoking, maintaining weight, and control of stress.

British research has also shown that what appears to be just one type of exercise setting - exercise classes - can reflect multiple motivations among participants. Schlackmans (1986) studied nearly 2,000 active and inactive women in ten towns in England. Several types of exercise classes were studied, including 'traditional' keep-fit, jazz-dance, and aerobic exercise-to-music. Six different clusters of participants were identified which reflected reasons for participation. These were 'sporty socialisers', 'weight conscious', 'keen exercisers', 'modern mothers', 'social contact', and 'get out of the house'. Explanations of these groupings are given in Table 1.

Motives: Summary and Implications

The data currently available from North America, Europe and Australia tends to cover children in sport and adults in exercise. More is needed on children in exercise and adults in sport. The information currently available shows that individuals have multiple motives for participation and that these change with age and vary between genders. Most groups appear to be motivated by reasons associated with health and well-being, and this is more pronounced for older adults. Reasons of challenge, skill and competition are associated with the younger age groups, and competition appears to decline rapidly as a major motive during adolescence.

Table 1. Clusters of participant groups for women's exercise classes (Schlackmans, 1986).

Group (% of exercise market)	Description
Sporty socialisers (25 %):	
	a) . interested in social aspects of participation
	b) . physically quite fit
	c) . good at other sports
	d) . interested in their own exercise progress
Weight conscious (18 %):	
	a) . exercise as a means to weight loss
	b) . self-perception of being overweight
	c) . less likely to take part in other sports
Keen exercisers (17 %):	
	a) . interested in physical fitness benefits
	b) . not so interested in social aspects
	c) . concerned for quality instruction
	d) . good at sport and perceive themselves to be quite fit
Modern mothers (16 %):	
	a) . keen on sport
	b) . perceive themselves to be quite fit
	c) . interested in their exercise progress
	d) . older than 'get out of the house' group
Social contact (15%):	
	a) . older than modern mothers group
	b) . women who live alone or had children who had left home
	c) . exercise was seen primarily for reasons of social contact
Get out of the house (8 %):	
	a) . youngest group
	b) . little interest in social or physical benefits
	c) . class used a means of getting away from the house

Psychological Outcomes of Participation as Motivators

This section of the paper will discuss briefly the issue of psychological outcomes. What psychological outcomes result from participation and to what extent do these act as motivators for participation? Although a great deal has been written on the potential psychological benefits of participation, little has been written about the potential motivational effects of such outcomes.

The literature reporting psychological outcomes of participation in physical activity cannot easily be divided into sport and exercise. Consequently, these will be combined, but separate reference will made where appropriate.

Children

Self-esteem. One of the most commonly believed outcomes of participation in sport and exercise for children is that of personality and 'character' development. However, the extent that this is a motivational issue, at least in the short term, is debateable. Nevertheless, a related issue - that of self-esteem development - has featured prominantly in recent research on motivation and mental health (see Biddle & Mutrie, 1991).

In a meta-analytic review of physical activity and self-esteem development in children, Gruber (1986) supported the link between activity and self-esteem. Specifically, he found that the average 'effect size' (strength of effect for self-esteem expressed in standard deviation units) was 0.47, showing that children in studies experiencing a physical activity intervention displayed self-esteem scores nearly one-half of a standard deviation higher than children in control groups. Subsequent analyses showed that the effect was larger for children with disabilities compared with 'normal' children, and for fitness activities over creative, sports or skill-based activities, although all types of activities had a positive link with self-esteem development.

Fox and Corbin (1989) report on the development of a multidimensional scale for the measurement of physical self-perceptions. They suggest that a more informative way to look at self-esteem is to investigate the relationships between global self-esteem and more discrete aspects of the self, such as physical self-worth. Their research shows that American college students tend to view physical self-worth as being comprised of sport competence, body attractiveness, physical strength, and physical condition. Preliminary evidence of a similar structure in American children has been reported by Whitehead and Corbin (1988). However, the structure of physical self-worth and physical self-perceptions in British children has not been clear (Biddle et al., 1991). Nevertheless, our own research has shown that physical self-perceptions are related to performance on an endurance run task, and to involvement in moderate to vigorous physical activity in 12 year old children (Biddle & Armstrong, in press; Biddle et al., 1991).

The direction of the link between self-esteem and physical activity in children has yet to be clarified. Do children high in self-esteem choose physical activity? Or do children in physical activity develop high self-steem? Sonstroem's work with adolescents suggested that it was perceptions of physical ability that were related to self-esteem, rather than actual physical ability.

Whatever the direction, those charged with promoting involvement in sport and exercise in children should seek the development of self-esteem and positive physical self-perceptions. The likelihood that these will stimulate and maintain participation is strong.

Enjoyment. The outcome of 'enjoyment' must be a critical variable to sport and exercise motivation in children. To date, the literature on children and physical activity has focussed on sport enjoyment only.

Wankel and Kriesel (1985) found that for Canadian children factors leading to sports enjoyment were associated with intrinsic and 'process' factors - those of skills, testing abilities, personal accomplishment and excitement. The least important were extrinsic or 'product' factors, such as winning.

Scanlan and Lewthwaite (1986), in a study of 9-14 year old male wrestlers, found that the best predictors of sport enjoyment were satisfaction expressed by parents, lack of negative maternal interactions, perceived ability, and positive adult involvement. Enjoyment was shown to be higher among younger participants. A model of sport enjoyment, based on the dimensions of achievement/non-achievement and intrinsic/extrinsic, proposed by Scanlan and Lewthwaite (1986), awaits further testing.

Despite the apparently high ecological validity of a construct such as enjoyment, little is known about the nature and extent of enjoyment experienced by children in sport and exercise. Similarly, the relationship between enjoyment and motivation is understood merely at the anecdotal level. This appears to be a strange state of affairs.

Adults

Mental Health Outcomes. Perhaps the most widely reported aspect of physical activity and psychological outcomes for adults has been in the area of 'mental health'. This is usually seen as changes in negative affect, such as anxiety and depression, and positive affect, such as self-esteem. Consensus statements suggest that such mental health benefits from exercise are likely, although the underlying reasons or mechanisms are not well understood (Biddle & Mutrie, 1991).

Nevertheless, recent meta-analytic reviews provide further information and directions (for a summary see Biddle, 1992). Such reviews are now available on the effects of exercise on anxiety (Petruzzello, Laudens, Hatfield, Kubitz & Salazar, 1991), depression (North, McCullagh & Tran, 1990), and stress reactivity (Crews & Landers, 1987).

One aspect of the mental health benefits of exercise that has been ignored is that of the motivational consequences of changed affective states. Evidence does exist to show that high levels of physical effort are related to dropout in exercise (Andrew et al., 1981), and recent British research by Steptoe and his colleagues has shown that positive changes in mood after exercise are associated more with moderate, rather than high, levels of exercise intensity (Moses, Steptoe, Mathews & Edwards, 1989; Steptoe & Bolton, 1988; Steptoe & Cox, 1988).

Similarly, the motivational effects of prescribed exercise levels requires investigation. For example, research has shown that effort perceptions may differ as a function of personality (Williams & Eston, 1989), and that individuals may differ in their preference for different levels of exertion. Rigid prescriptions based on physiological principles alone, therefore, may be inappropriate and have a negative effect on exercise motivation in adults.

Stephens (1988), in his analysis of four large surveys in North America, found that the mental health benefits of physical activity were more likely to be detected in women and in older adults. Again, studies taking account of life cycle influences and stages are required to understand the motivational consequences of mental health outcomes.

Enjoyment. Csikszentmihalyi (1975) studied a range of activities that adults participated in for apparently intrinsic reasons, including sport. Such activities he labelled *'autotelic'*, meaning self-directing or 'self-purpose'. He found that states of high-level enjoyment or 'flow' were only likely to occur when there was a match betweenf the callenge offered and the available skills of the individual. Mismatches produced anxiety or boredom.

Wankel (1985) reported results from a study of 111 participants and dropouts from an employee fitness programme. Enjoyment of the programme was a strong predictor of whether the participant stayed with the programme or dropped out.

Psychological Outcomes: Summary and Implications

A great deal of time and effort has been spent in the psychology of sport and exercise trying to identify antecedent factors of motivation. However, little has been done to understand the role that psychological outcomes of participation may play in the reinforcement or encouragement of participation. The large and growing literature on the effects of exercise on mental health appears to be a logical starting point to redress this imbalance. Given that we know that of those who start an exercise programme only about half will still be participating several months later (Dishman, 1988), more resources need to go into understanding what it is that people find motivating or demotivating about the sport and exercise experience.

A Process Model of Motivation

Sallis and Hovell (1990) propose a process model for the study of the determinants of exercise participation in adults (see Figure 1). The extent to which this is applicable for children remains to be seen. Discrete stages of adoption,

maintenance, dropout, and resumption may not be applied easily to children, particularly outside of the more structured sport environment. Spontaneous play of children may be influenced by transient factors such as fashions and seasons. Children's cognitive development will also play a role in the extent to which conscious decisions are made about participation in physical activity. The best we can apply at this stage for children are models developed to explain behaviour outside of physical activity, such as Harter's (1978) competence motivation theory. In short, a process model of children's motivation in sport and exercise, based on developmental principles, is now needed (Gould & Petlichkoff, 1988).

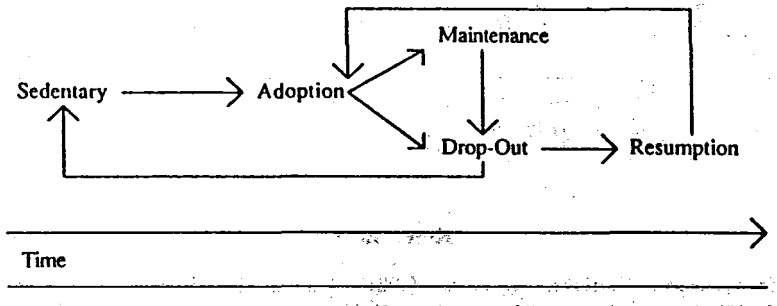

Figure 1. A process or 'natural history' model of exercise behaviour, proposed by Sallis & Hovell (1990).

Sallis and Hovell's (1990) model provides a useful framework from which to view adult involvement in exercise and sport. Elsewhere I have summarised the potential determinants or motivational antecedents that may impact at each of these stages, and practical implications of helping adults at each of these stages (Biddle, in press; Biddle & Smith, 1991). A somewhat speculative summary is shown in Table 2. The principle appears to be correct that different stages in the process model will require different motivational interventions, but the state of our knowledge is such that we are still unsure as to which factors are most important and at which stage. No study has tested the process model with this in mind.

Table 2. Possible correlates or determinats of exercise at the different stages of participation proposed by Sallis & Hovell (1990) (see Biddle, in press, Biddle & Smith, 1991).

	STAGES			
Variables	Adoption	Maintenance	Dropout	Resumption
Beliefs and attitudes	**	*	*	*
Self-perceptions; confidence and control	**	**	**	**
Personality and motivation	*	**	**	*
Social and environmental	**	*	**	**
Biological	*	**	***	*
Mental health outcomes	**	***	***	*
Self-regulatory skills	**	***	***	***

* possible small influence
** likely influence
*** likely strong influence

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Ziel

THE RELATIONSHIP OF GOAL ORIENTATIONS TO BELIEFS ABOUT SUCCESS, PERCEIVED ABILITY, AND SATISFACTION IN SPORT[1]

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Nicholls' (1989) goal perspective theory of achievement motivation holds that there are important individual differences in how people tend to judge their competence and define success. One perspective, termed task orientation, entails that perceptions of ability are self-referenced and the experience of learning, personal improvement, and task mastery occasion a sense of achievement. A second perspective predominates, labelled ego orientation, when perceived ability is normatively-referenced. When ego-oriented, the demonstration of superior skill or competence lays the basis for subjective success. In classroom research, students' goal orientations have been found to be consistent with their beliefs about how success is generally caused in that setting (Nicholls, 1989; Nicholls, Cheung, Lauer & Patashnick, 1989). Task orientation is linked with the beliefs that academic success stems from working hard, trying to understand class material rather than memorize, and collaboration with classmates. Ego orientation is coupled with the beliefs that success in school requires attempts to beat others and superior ability.

With respect to other dimensions of achievement motivation, task and ego orientation is only slightly correlated with perceived ability in the classroom (Nicholls et al., 1989). Satisfaction with school is not highly related to ego orientation, but is moderately and positively associated with task orientation (Nicholls et al., 1989).

The tenets of Nicholls' goal perspective theory of achievement motivation have begun to be tested in the sport domain (see Duda, in press a, in press b, for reviews of this literature). This research has provided support for the existence and salience of a task and ego orientation in the athletic setting. For example, individual differences in goal perspective have been found to relate in a conceptually consistent manner to views about the purposes of sport (Duda, 1989) and attitudes toward sportspersonship and aggression (Duda, Olson & Templin, 1991).

The interdependencies between goals, beliefs, perceived ability, and satisfaction,

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[1] The data and analyses presented here are part of a larger study entitled "Dimensions of achievement motivation in schoolwork and sport" which is being reviewed for publication in the Journal of Educational Psychology.

however, have not been systematically examined in the sport context. The purpose of this study was to determine the relationship of goal orientations to beliefs about the causes of success, perceived ability, and intrinsic satisfaction in sport and compare the current findings to previous classroom-based research.

Method

Subjects

The subjects, who were varied in current and past sport involvement, consisted of 99 male and 108 female students from a large high school in the Midwestern part of the U.S. Their mean age was 15.1 years; 70% of the sample was white and 22% were black.

Procedure

The questionnaire, which took approximately 30 minutes to complete, was orally administered in a classroom setting. Responses were anonymously indicated on a computer scored sheet.

Measures

The questionnaire assessed: 1) relevant demographic information, 2) the students' goal orientations, beliefs about the causes of success, perceived ability, and intrinsic interest in sport. All responses were indicated on 5-point Likert-type scales (1= strongly agree, 5= strongly disagree).

Goal Orientations

Individual differences in goal perspective in the athletic domain were assessed via the Task and Ego Orientation in Sport Questionnaire or TEOSQ (Duda, 1989; Duda & Nicholls, 1991). Students were asked to think of when they personally felt most successful in sport and then indicate their degree of agreement with task-oriented (e.g., "I feel successful when I learn a new skill by trying hard") and ego-oriented (e.g., "I feel successful when others can't do as well as me") criteria. Alphas for the task and ego scales were .89 and .86.

Beliefs About the Causes of Success

Measures developed by Nicholls and his colleagues (Nicholls et al., 1989) were reworded so that they were pertinent to the sport setting. Specifically, students were asked "What do you think is most likely to help people do well or succeed in

the sport you play most often?" and then indicate their agreement with 20 causes of sport success. Factor analysis of these items revealed four major beliefs about the causes of athletic success, namely that sport achievement is a result of Motivation/Effort (e.g. "People succeed if they like to practice"), Ability (e.g., "People succeed if they are born natural athletes"), Deception (e.g., "People succeed if they know how to cheat"), and External Factors (e.g., "People succeed if they have the right clothes and equipment"). Respective alphas were .87, .76, .67, and .79.

Perceived Ability

Based on the work of Nicholls and his colleagues (Nicholls et al., 1989), students were requested to indicate their agreement with 4 items assessing their perceived ability in sport (e.g., "In sport, I am one of the best athletes").

The coefficient alpha for this scale was .89.

Intrinsic Satisfaction

Students were requested to respond to 8 items which comprised 2 subscales, namely Satisfaction/Enjoyment (e.g., "I usually enjoy playing sports") and Boredom (e.g., "When playing sports, I am usually bored") (Nicholls et al., 1989). Respective alphas were .94 and .83.

Results

Goals and Beliefs About Success

Sport task orientation was significantly correlated with the belief that success stems from motivation and hard work (Table 1). Students who were high in task orientation tended to downplay the role of external factors and deception in sport achievement. In contrast, a moderately high correlation emerged between sport ego orientation and the beliefs that the possession of superior ability results in success. A low albeit significant association emerged between ego orientation and the beliefs that deceptive tactics and *external factors cause* success in sport.

Table 1. Correlations between goal orientations and 88beliefs about success.

	Sport Goals	
	Task Orientation	Ego Orientation
Sport Beliefs		
Motivation/Effort	.50***	-.03
Ability	-.03	.44**
Deception	-.14	.15*
External Factors	-.33***	.16*

* p < .05 ** p < .01 *** p < .001

Goals, Perceived Ability, and Intrinsic Satisfaction

There was a low and positive correlation between task orientation and perceived ability (see Table 2). Task orientation was positively related to the satisfaction and enjoyment experienced and negatively associated with reported boredom in sport (Table 2). There was a slight, positive relationship between ego orientation and perceived ability.

Table 2. Correlations between goals orientations and perceived ability, satisfaction/enjoyment, and boredom.

	Sport Goals	
	Task Orientation	Ego Orientation
Sport Perceptions		
Perceived Ability	.28**	.29**
Satisfaction/Enjoyment	.34**	.05
Boredom	-.28**	-.00

* p < .05 ** p < .01 *** p < .001

Discussion

Consistent with previous classroom research (Nicholls, 1989; Nicholls et al., 1989), conceptually coherent associations emerged between goal perspectives and beliefs about the causes of success in the athletic setting. These divergent goal-belief relationships reflect two distinct theories of sport success or conceptions of what is important in sport and how sport operates (Nicholls, 1989). Since success

is deemed to be a function of internal and personally controllable elements (e.g., practicing, trying hard), holding a task-oriented theory of sport achievement should result in maximal motivation. The adoption of an ego-oriented theory of sport success, however, should be more likely to lead to motivational difficulties. If people believe that talent is the primary prerequisite to accomplishment in the athletic domain and they doubt their competence, such individuals would tend to rescind effort and/or quit playing sport all together (or perhaps look toward more deceptive means to sport success).

Task and ego orientation did not strongly relate to perceived ability in sport. These correlations were not appreciably higher than the associations observed in classroom work (Nicholls, 1989).

Aligned with research in academic settings (Nicholls, 1989), task orientation positively related to intrinsic satisfaction with sport. As a strong task orientation tends to foster a sense of self determination and competence, and reflects the view that sport is an "end in itself", we would expect that this goal perspective would correspond to greater reported fun and interest in the athletic domain (Duda, 1989; Nicholls, 1989).

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Sportmotivation von Kindern und Jugendlichen

Sport Motivation of Children and Youths

MULTIPLE GOAL PERSPECTIVES AND PERSISTENCE IN CHILDREN'S SPORT

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This paper, the second one in the Symposium on Children's Motivation in Sport, was adapted to link the other papers and set the scene for discussion. It continues the study of correlates of self-referenced and comparative-referenced achievement goals explored by Joan Duda in the first paper, and shows that other goal orientations, notably social approval and teamwork, also influence sport persistence. This prepares for Simo Salminen's paper on the development of task-based and socially-based preferences. It also raises developmental and contextual issues which prepare for Martin Lee's paper on values in the sport context. His paper closes the circle, taking a different perspective from Joan Duda (in press) on relationships between motives and beliefs in sport.

An early paper in the study of achievement goals was that of Maehr and Nicholls (1980) who proposed the existence of three subjective achievement orientations: (a) an ability orientation in which the goal is to show high ability and avoid any appearance of low ability, and in which ability is inferred by comparison with others; (b) a task mastery orientation in which the goal is to master a skill for its own sake, so the performance of other people is irrelevant; and (c) a social approval orientation in which the goal is to please others. Ewing (1981) was the first to find these perspectives in youth sport, and she also found behavioural correlates. Competitors in high school sport were higher than dropouts in the social approval orientation and lower in the ability orientation.

This work in the United States has been replicated and extended (Whitehead, 1990)[1] with four successive British samples (N=830, 1198, 136, 1273). The first study used an adaptation of Ewing's instrument and extended the sample to include younger subjects and nonschool sport. The subjects, who were drawn from middle schools (9 to 13 years) and upper schools, answered a questionnaire which required them to first recall an occasion on which they had felt successful in sport and then to use a 5-point Likert scale to rate the extent of their agreement with possible reasons for feeling succesful on that occasion: e.g. I showed how clever I was; My performance made me feel good; I pleased people who are important to me; It was like an adventure. They also completed questionnaires about their past and present sport participation in school and nonschool contexts and this data was used to categorise them as competitors, dropouts or non-participants with reference to each

[1] These studies were carried out with the assistance of small grants from the National Coaching Foundation, Leeds, England.

context.

Factor analyses of the Likert ratings were conducted separately for each age group, and the factor scores were used in subsequent MANOVA and discriminant analyses to determine relationships between goals and participant status. Although there were age differences in the structure of the factors, the three goal orientations were clearly identified in each age group together with an additional intrinsic factor which Ewing found and later termed sportventure. In the middle school age group, although there was also an undefined fifth factor, this is the first occasion on which the three original factors have been unambiguously defined. The critical incident methodology, which required responses to be made in relation to an incident selected by the subject, appeared to be important in providing a frame of reference for the younger subjects to rate their developing priorities. It is recommended for subjects of this age in preference to more generalised questions. Significant multivariate differences in the motives of the contrasting participant groups were found for each age and context but the discriminating orientations differed as follows.

First, task mastery was the major discriminating orientation in the middle school sample, but ability was the major discriminator in upper schools. This is consistent with Nicholl's developmental theory of motivation which proposes that children's concern is to master their environment until they are socialised into comparative views of ability.

Second, the social approval orientation was a significant discriminator in the upper school sample and replaced the task-mastery orientation in salience for this age group. One purpose of this paper is to draw attention to the role of social approval when considering subjective views of success.

Third, there were contextual differences. In the middle school sample, ability was a significant discriminator only in the nonschool context. This may indicate that socialisation into the comparative view begins with participation in nonschool sport or that only those children who are keenest to demonstrate ability seek this extra avenue for sport participation. Nonschool competitors were higher than dropouts in both task and ability motives.

Surprisingly, upper school competitors in the nonschool context were also more ability-oriented than dropouts. This contrasts data from Ewing's study and from the school context where dropouts were more ability-oriented than competitors. The latter results are consistent with Nicholls' theory. His work on cognitive development shows that most children do not fully distinguish between ability and effort as causes of their performance until about 12 years of age. After this, they recognize that effort cannot compensate for a lack of ability and those with an ability-orientation but low perceived ability withdraw effort to avoid exposing a lack of ability. Hence it is only in the upper school sample that this effect would be

expected. The results of this study, however, indicate that the effect is mediated by sport context as well as by age.

The purpose of the second study was to extend Ewing's instrument to explore the existence of further achievement goals. Respondents in the first study added their own reasons for feeling successful to Ewing's list. 1398 statements were obtained and analysed and some were used in constructing a 50-item questionnaire which was answered by 1198 subjects aged 9-16 from schools and sports clubs.

Factor analysis initially yielded 13 factors with eigen values of 1.00 or more. While this clearly demonstrates that their are multiple subjective achievement orientations in children's sport it was decided that a simpler model would be more easily applicable by coaches. A 5-factor varimax extraction was performed on the basis of a theoretical model and analysis of the first study. This yielded the ability, mastery and social approval orientations, with ability being redefined as superiority, and two additional factors: (a) a teamwork orientation in which success was defined by cooperating with others in contrast to achieving something independently; and (b) a breakthrough orientation characterised by doing something that had been thought impossible, or that was qualitatively different from past experience. These factors are meaningful in extending the study of achievement goals to the children's sport context, because the first relates better to sport rather than academic work, and the second to children more than adults.

The third study was undertaken to discover whether these goals related to future persistence and dropout. A sub-sample of 136 competitors in rugby and athletics (track and field) was followed up for a year, by which time 26% had droppped out. MANOVAs and discriminant analyses were again performed but, because of small sample size, scale scores rather than factor scores were analysed. There were again significant multivariate and univariate differences in the motives of the persisters and dropouts. The superiority, teamwork and breakthrough orientations were significant discriminators overall, but sport-specific analyses showed rugby dropouts to be lower than persisters in the teamwork orientation while athletics dropouts were higher than persisters in the superiority orientation.

This is the first evidence from a longitudinal study in sport that achievement goals relate to sport persistence. The athletics result is consistent with Nicholls' theory but the finding that teamwork was the significant discriminator in rugby again demonstrates both the importance of social factors in perceptions of success and the mediating role of contextual factors. The data imply the existence of sport-specific achievement climates.

Carol Ames (in press) has reported a number of studies in which persistence after failure is reduced when the classroom climate is perceived to focus on comparative performance. Extending this reasoning to sport, it can be shown that individual sports are perceived to be more evaluative than team sports and are preceded by

higher states of anxiety (Simon & Martens, 1979). Hence Nicholls' theory concerning achievement goals can be integrated with the model of Martens, Vealey and Burton (1991) for competitive anxiety in which stress occurs when individuals perceive a mismatch between the task demands and their ability to meet them, in conditions where success is important. It is likely that adolescents competing in individual sports will perceive that task demands exceed their abilities and so withdraw effort for this reason before those in team sports reach a similar conclusion. Responsibility for team outcome is more diffused. Future research should examine salient achievement cues in different sports contexts.

The purpose of the fourth study was to further improve the instrument and perform confirmatory factor analyses. The 5-factor model was changed to the 6-factor model shown in Table 1 because gender differences were found in further analyses of the second study. There was an independent victory factor for males, characterised by doing better than others in direct competition (e.g. I defeated a capable opponent) rather than indirectly (e.g. I set an example). The present model comprises the three goals originally proposed by Maehr and Nicholls (1980) and the three further goals here identified in children's sport. The goals can be considered in three pairs, or higher order factors: personal progress, beating others, and pleasing others. The teamwork goal is focussed on pleasing team members. Outcomes of goals in the last two categories, where the aim is to either beat others or please them, are not under personal control.

Table 1. The 6-factor model for the fourth study.

Maehr & Nicholls General goals	Whitehead Sport-derived goals	Goal category
Task mastery	Breakthrough	Personal progress
Ability	Victory	Beating others
Social approval	Teamwork	Pleasing others

Items from the second questionnaire which best identified the 6 factors were selected for a new instrument, to which further exploratory items were added. This was adminstered to an new sample. Structural modelling techniques using the LISREL VI programme support the structure[2], and construct validity has been demonstrated by comparison with Duda's TEOSQ. Reliability in different age groups is currently being examined. The sport-derived goals extend the potential for studying mediating influneces on the effects of goal perspectives in youth

[2] This work was carried out while a visiting scholar at Purdue University, Indiana, USA.

sport. The victory perspective demonstrates gender differences, the breakthrough perspective shows age differences, and the teamwork perspective mediates dropout in team and individual sports.

Collectively these four studies raise not only contextual and developmental issues, but also cultural and conceptual ones. The importance of success in sport and in schoolwork differs in the UK and the USA (Whitehead, 1987) and research should consider the cultural and contextual salience of achievement goals as well as integrating studies of goal perspectives, coaching behaviour, anxiety, values, satisfaction and other variables.

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TESTING THE THEORY OF ROLE DIFFERENTIATION WITH A FIVE YEAR FOLLOW-UP STUDY OF JUNIOR ICE HOCKEY PLAYERS

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Role differentiation theory states that the longer the group has been together the more separate are the friendship and skill choices of the group members (Hofstätter, 1956). Sport teams offer a good chance to test the theory, because sport teams can stay together for a long time. Both friendship and skill choices are adequate to the sport teams. The leadership structure of sport teams is usually clearly defined.

The role differentiation theory has been tested most explicitly by Meding (1986). His subjects were women's basketball teams in Bundesliga and Oberliga whose players filled up a sociometric questionnaire three times during one season. According to the theory the correlation between friendship and skill choices of the Bundesliga players decreased from .95 to .80 and the Oberliga players from .44 to 0.3. However, against the theory correlations in the higher level team were stronger than in the lower level team.

Voigt (1973) has compared players of the volleyball team of the Federal Republic of Germany who participated in the Olympic Games and school children from a sport class. The correlation of the friendship and skill choices for those players who had been in national teams more than two years was .70 and for those who belonged to the team less than two years .58, which does not support the theory. The friendship and skill choices of school children are correlated .89, which was in line with the theory.

Most of the 13 other studies mostly made in Germany but also in USA and Finland have confirmed the role differentiation theory, because the higher the skill level of the team, the higher differentiation between friendship, leadership and skill choices (Salminen 1989, Salminen & Luhtanen, 1990). However, the role differentiation theory is not universally valid, because it has been supported only in socio-emotional or activity groups. In contrast, the data on work teams do not confirm it, expect for sport groups (Naul & Voigt, 1972).

Role differentiation theory was seldom studied in the deceased socialist countries. Based on their collective nature, we could assume that there the role differentiation was weaker than in western countries. They have used a modified sociometric questionnaire, Group Analysis Procedure in the former DDR. In three male athletic groups the correlations between friendship and leadership choices varied from .73

o .82, between friendship and skill choices from .62 to .85 and between leadership nd skill choices from .72 to .84 (Schellenberger, 1990). Correlations were considerably strong, indicating the lower level of role differentiation.

Almost all studies of role differentiation have used a cross-sectional design. The duration time of being together of the group has been varied by comparing players of different age. But the real testing of the role differentiation theory requires to follow-up the same teams during several years in order to examine the influence of the duration time of being together. In this study the development of friendship, leadership and skill choices made by the same players has been followed up during five years. We can also make cross-cultural comparisons, because teams from three different countries participated in the study.

Material and Methods

As part of a larger study (Luhtanen & Salminen, 1991) the data of this study consist of one junior ice hockey team from Finland, Sweden and Czechoslovakia respectively, who played a tournament once a year. In 1985 71 boys, in 1986 74 players, in 1987 64 boys, in 1988 44 players and in 1989 40 boys (all born in 1974) participated in the study. The Slovakian team could not participate in the 1988 tournament and the Swedish team was absent in the last tournament. At each tournament the players filled in a sociometric questionnaire. The popularity of players was measured by asking "Who are your best friends in the team?", leadership choices by asking "Whom would you choose as a captain or vice captain of the team?", and skill was measured by asking "Whom of the players would you want to belong to your team?"

Because the design of the study assumes changes in the correlations during the five year follow-up period, we have examined the trends in correlations several statistical tests. The general development of the correlations was evaluated by Jonckheere's (1954) test. The changing of individual correlations was examined by Kendall's (1976) tau. The significance of differencies between the first and last correlations in every correlation series was tested by Fisher's Z transformation (Spiegel, 1961).

Results

Table 1 shows the correlations between friendship, leadership and skill choices of the Finnish players. According to role differentiation theory we find a general decreasing trend by age in the correlations based on the Jonckheere test ($z=1.31$, $p<0.10$). There is a significant decreasing trend in the correlations between

friendship and leadership choices (tau=0.80, $p<0.05$).

Table 1. Product-moment correlations between friendship leadership and skill choices of Finnish players

Age	N	Friendship-Leadership	Friendship-Skill	Leadership-Skill
11	(25)	.50	.51	.72
12	(25)	.63	.61	.69
13	(25)	.49	.33	.56
14	(22)	.48	.61	.74
15	(20)	.31	.01	.36

In the Swedish team the correlations don't decrease systematically according to Jonckheere test (z=-0.46, n.s.) (Table 2). There is, however, a decreasing trend in the correlations between friendship and skill choices (tau=1.00, $p<0.05$).

Table 2. Product-moment correlations between friendship, leadership and skill choices of Swedish players.

Age	N	Friendship-Leadership	Friendship-Skill	Leadership-Skill
11	(22)	.57	.55	.81
12	(24)	.41	.51	.73
13	(18)	.44	.32	.85
14	(22)	.30	.32	.41
15)		-	-	-

There is no general decreasing trend in the correlations of the Slovakian team (z=0.46, n.s.) (Table 3). The correlations between friendship and skill choices decrease as a trend (tau=1.00, $p<0.05$). The correlations between leadership and skill choices in the age of 11 and 15 are signicantly different (Z=2.14, $p<0.05$).

Table 3. Product-moment correlations between friendship, leadership and skill choices of Slovakian players.

Age	N	Friendship-Leadership	Friendship-Skill	Leadership-Skill
11	(25)	.51	.65	.85
12	(25)	.42	.65	.63
13	(25)	.40	.39	.80
14		-	-	-
15	(20)	.43	.10	.32

Discussion

Our results strongly confirmed Hofstätter's role differentiation theory, because we found decreasing trends in the correlations between friendship, leadership and skill choices of the junior ice hockey players during a five year follow-up period. The decreasing trends were not, however, linear. That is why all the trends did not reach statistical significance. The relation between friendship and skill choices was the most differentiated.

We assumed that the role differentiation was weaker in the socialist countries than in western countries. This assumption was not supported, because the correlations of the Slovakian players were as differentiated as those of the Finnish and Swedish players. This result confirms the universality of the role differentiation theory. The political change in Eastern Europe in 1989 did not influence the results.

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ZUM MOTIVATIONSPROFIL JUGENDLICHER HOCHLEISTUNGSSPORTLER

ERGEBNISSE AUS EINER LÄNGSSCHNITTSTUDIE IN DEN SPORTARTEN EISKUNSTLAUFEN, KUNSTTURNEN UND SCHWIMMEN

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Wenn man sich - wie in unserem Forschungsprojekt - mit den "Auswirkungen des Hochleistungssports bei Kindern und Jugendlichen" beschäftigt, ist es aus einer psychologischen Perspektive fast verpflichtend, auch nach motivationalen Gesichtspunkten Ausschau zu halten.

Die Psychologie der Leistungsmotivation läßt in Anwendung auf den Hochleistungssport mindestens zwei Grundannahmen plausibel erscheinen:

- Die eine ist, daß schon von vorneherein eine relativ stark ausgeprägte Leistungsmotivation vorhanden sein muß, damit man sich überhaupt auf den Hochleistungssport einläßt.
- Die andere wäre, daß sich das Leistungsmotiv im wesentlichen erst im Laufe der Ausübung von Hochleistungssport zu der dafür erforderlichen Ausprägung herausbildet.

Die *erste Hypothese* ist in unserer Untersuchung nicht zu prüfen gewesen, da die Kinder und Jugendlichen nicht untersucht worden sind, bevor sie in den Hochleistungssport eingetreten sind, bzw. als sie am Beginn ihrer leistungssportlichen Karriere standen. Zu unserem Erstbefragungszeitpunkt D1 haben sie bereits mehr oder weniger lange und intensiv Hochleistungssport betrieben. Eine spezifische, auf Leistung ausgerichtete Motivation konnte sich also schon herausgebildet haben.

Träfe *die zweite* Hypothese zu, daß sich Leistungsmotiviertheit durch das Betreiben einer leistungsorientierten Tätigkeit verstärkt, dann müßte sich - zumindest bei den langfristig aktiven Hochleistungssportlern - ein Anstieg feststellen lassen. Hinsichtlich der ausgestiegenen Befragten stellt sich die Frage, ob die Leistungsmotiviertheit nach dem Aussteigen absinkt.

Methode

An allen drei Befragungszeitpunkten wurde den Befragten ein Einschätzverfahren zur Beurteilung vorgelegt, in dem durch ein quantifizierendes Urteil die motivatio-

nale Basis für das hochleistungssportliche Engagement erhoben wurde.

Die Befragten sollten auf zwei elfstufigen Skalen angeben und gegeneinander abwägen, in welchem Ausmaß die im Hochleistungssport tätigen Jugendlichen anderen Jugendlichen gegenüber benachteiligt oder begünstigt sind. Anschließend sollten die zum Ausdruck gebrachte Gewichtung der Vor- und Nachteile auch noch inhaltlich genauer spezifiziert werden (Nennung von Vor- und Nachteilen).

Unsere Längsschnittuntersuchung erstreckte sich über die Jahre von 1974 bis 1986, insgesamt fanden drei Datenerhebungen statt, im folgenden D1, D2 und D3 benannt.

In der Erstbefragung D1 (1974/75) wurden insgesamt 98 Sportler und Sportlerinnen im Alter von 10 bis 14 Jahren aus den Sportarten Eiskunstlauf (EK), Schwimmen (SW) und Kunstturnen (KT) befragt. Da zu D2 (1978/79) bereits ein "Schwund" der Stichproben durch Aussteiger aus dem hochleistungssportlichen Engagement und Untersuchungsverweigerer eingetreten war, wurden nochmals 54 aktive Sportler und Sportlerinnen in die Befragung mit aufgenommen, so daß insgesamt zu D2 144 Probanden befragt wurden, zu D3 (1986) waren schließlich noch 94 bereit, auch an einer dritten Befragung teilzunehmen.

Ergebnisdarstellung

Die Gesamtübersicht der Mittelwerte der Vor- und Nachteilgewichtungen (Tabelle 1) macht deutlich, daß über alle Befragungszeitpunkte hinweg die Vorteilgewichtung die Gewichtung der Nachteile im Mittel überwiegt. Auffällig ist, daß zu D2 hin die Vorteil-Nachteil-Bilanz deutlich absinkt, zu D3 hin dann geringfügig wieder ansteigt. Dies wurde von uns als "Jugendalter-Motivations-Loch" benannt.

Tabelle 1. Vorteil- und Nachteileinschätzung einer hochleistungssportlichen Betätigung (Mittelwerte).

Datenerhebung	D1 (1974/75)	D2 (1978/79)	D3 (1986)
Untersuchungsteilnehmer[1]	N = 98	N = 144	N = 94
Vorteile	7,41	6,85	7,27
Nachteile	4,09	5,36	5,24
Bilanz	3,32	1,49	2,03

Skala: überhaupt keine (1) ..... außerordentlich viele (11)
Nachteile bzw. Vorteile

[1] Gesamtanzahl der Untersuchungsteilnehmer N = 153

Der hier verwendete Motivationsbegriff basiert übrigens auf einem naiv-alltagspsychologischen Verständnis, wobei die Vorteil- und Nachteilgewichtung als Ausdruck der Intensität von Motiven betrachtet wird, sich mit dem Betreiben von Hochleistungssport verbunden zu fühlen.

So wäre den vorliegenden Ergebnissen zufolge zu vermuten, daß zu D2 eine gewisse kritische Grundhaltung gegenüber dem Hochleistungssport bei den Befragten eingetreten ist.

In der Überprüfung von Geschlechts- (Tabelle 2) und Sportartenunterschieden (Tabelle 3) zeigen sich spezifische Tendenzen auf:

Tabelle 2. Vorteil- und Nachteileinschätzungen im Geschlechtsvergleich (Mittelwerte).

Weibliche Befragte			
N = 74	D 1	D 2	D 3
Vorteile	8,02	6,75	7,44
Nachteile	3,98	5,59	5,15
Bilanz	4,04	1,16	2,29
Männliche Befragte			
N = 79	D 1	D 2	D 3
Vorteile	6,82	6,95	7,12
Nachteile	4,18	5,15	5,33
Bilanz	2,64	1,80	1,79

Tabelle 3. Vorteil- und Nachteileinschätzungen im Sportartenvergleich (Mittelwerte).

Eiskunstlaufen			
N = 36	D 1	D 2	D 3
Vorteile	6,71	6,82	6,00
Nachteile	3,86	5,41	6,73
Bilanz	2,85	1,41	-0,73
Kunstturnen			
N = 67	D 1	D 2	D 3
Vorteile	7,30	7,00	7,33
Nachteile	4,09	5,46	4,75
Bilanz	3,21	2,54	2,58
Schwimmen			
N = 50	D 1	D 2	D 3
Vorteile	7,81	6,69	7,83
Nachteile	4,28	5,21	5,10
Bilanz	3,53	1,48	2,73

In den Urteilen zu D1 ("Basismotivation") ist bei den Sportlerinnen ein deutliches Überwiegen der Vorteile zu beobachten, zu D2 hin findet hier ein deutlicher Einbruch statt. Bei den Sportlern ist zwar ebenfalls ein Absinken zu D2 hin festzustellen, jedoch ist diese Veränderung eher geringfügig.

In der Teilstichprobe der Eiskunstläufer ist besonders eindrucksvoll, daß zu D3 die Nachteile die Vorteile überwiegen, sozusagen eine negative Motivationsbilanz vorliegt.

Bereits zu D1 findet sich bei den Eiskunstläufern vergleichsweise die geringste Basismotivation. Bei den Kunstturnern bleibt die Bilanz in etwa gleich; bei den Schwimmern ist zu D2 hin ein deutliches Absinken, zu D3 hin dagegen ein Anstieg festzustellen. Dies macht deutlich, daß große sportartspezifische Unterschiede in der Entwicklung des Motivationsprofils anzunehmen sind.

Tabelle 4. Vorteil- und Nachteileinschätzungen von Karrierezeit-Typen (Mittelwerte).

Frühaussteiger						
N = 48	D 1		D 2		D 3	
Vorteile	7,61		6,67		6,55	
Nachteile	4,35		6,38		5,19	
Bilanz		3,26		0,29		1,36
Mittelfristige Aussteiger						
N = 31	D 1		D 2		D 3	
Vorteile	6,74		7,00		7,11	
Nachteile	4,21		4,87		5,82	
Bilanz		2,53		2,13		1,29
Spätaussteiger						
N = 18	D 1		D 2		D 3	
Vorteile	7,40		7,44		7,94	
Nachteile	4,00		4,89		4,81	
Bilanz		3,40		2,55		3,13
Aktive						
N = 19	D 1		D 2		D 3	
Vorteile	7,88		7,05		7,71	
Nachteile	4,00		4,79		4,76	
Bilanz		3,88		2,26		2,95

Hinsichtlich der Verweildauer im hochleistungssportlichen Engagement wird deutlich, daß die langfristig Aktiven zu D1 bereits die höchste Basismotivation aufweisen. Bemerkenswert ist, daß auch bei den Frühaussteigern (bis zu D2 ausgeschieden) eine vergleichsweise hohe Basismotivation vorliegt. Zu D2 hin ist jedoch bei ihnen eine deutliche Abschwächung festzustellen, die Bilanz sinkt gegen Null ab. Die mittelfristigen Aussteiger (kurz nach D2 ausgeschieden) weisen insgesamt eine eher geringe Motivationsbilanz auf, die über die Befragungszeitpunkte tendentiell absinkt. Bei den Spätaussteigern (kurz vor D3 ausgeschieden) ist zu D3 die höchste "Motivationsschlußbilanz" aufzufinden - dies könnte ein Ausdruck für eine besonders gelungene hochleistungssportliche Karriere sein (Tabelle 4).

Ein immer wieder umstritten diskutierter Gesichtspunkt ist die Frage, was Kinder bzw. Jugendliche dazu bewegen kann, in relativ jungen Jahren sich dem Hochleistungssport zu verpflichten. Bei der Befragung D3 wurden die Probanden gebeten, in eigenen Worten ihre ursprünglichen Motive zu benennen, in ihrer Sportart leistungsbezogen zu trainieren. Die erhaltenen Aussagen konnten sechs verschiedenen "Karriere-Einstiegstypen" zugeordnet werden (s. Tabelle 5).

1. Leistungsorientierte
2. Mitmacher
3. Senkrechtstarter
4. Fähigkeitsmaximierer
5. Anerkennungsorientierte
6. Fremdbestimmte

Zu D1 lag die höchste Basismotivation bei den "Mitmachern" vor, zu D2 hin ist bei diesen ein deutlicher Motivationseinbruch festzustellen. Die niedrigste Basismotivation ist anfangs bei dem Typ der "Fremdbestimmten" zu beobachten gewesen. Hier ist bemerkenswert, daß diese Typus zu D2 die relativ höchste Motivationsbilanz aufweist. Dies könnte einerseits einen Angewöhnungseffekt widerspiegeln, andererseits aber auch Ausdruck einer fehlenden kritischen "Jugendalter-Einstellung" dem Hochleistungssport gegenüber sein und auf eine überdauernde hohe Anpassungsbereitschaft schließen lassen. Die vielleicht *positivste Entwicklung* scheint der Typ der "Anerkennungsorientierten" zu erfahren: hier ist ein kontinuierliches Anwachsen der Vorteilhaftigkeit festzustellen, die Abschlußmotivationsbilanz ist vergleichsweise am höchsten. Zum Typ der Anerkennungsorientierten wurden diejenigen gerechnet, die das Erreichen bestimmter Titel oder Plazierungen als Karriereziel benannt haben. Die möglichst konkrete Benennung eines Zielaspektes der hochleistungssportlichen Karriere könnte also eine günstige Voraussetzung für eine zufriedenstellende motivationale Entwicklung sein. Auf die *Verweildauer* im hochleistungssportlichen Geschehen bezogen erweist sich wohl

eine leistungsorientierte sowie fähigkeitsmaximierende Grundausrichtung als am günstigsten.

Tabelle 5. Vorteil-und Nachteileinschätzungen von Karriereeinstiegs-Typen.

Leistungsorientierte						
N = 19	D 1		D 2		D 3	
Vorteile	7,88		7,32		7,41	
Nachteile	3,63		5,26		5,31	
Bilanz		4,25		2,06		2,10
Mitmacher						
N = 19	D 1		D 2		D 3	
Vorteile	8,21		6,32		6,80	
Nachteile	3,86		5,63		4,53	
Bilanz		4,35		0,69		2,27
Senkrechtstarter						
N = 16	D 1		D 2		D 3	
Vorteile	6,38		6,80		7,21	
Nachteile	3,63		4,9,		5,33	
Bilanz		2,75		1,87		1,88
Fähigkeitsmaximierer						
N = 14	D 1		D 2		D 3	
Vorteile	7,13		6,07		7,17	
Nachteile	3,88		4,86		5,50	
Bilanz		3,25		1,21		1,67
Anerkennungsorientierte						
N = 13	D 1		D 2		D 3	
Vorteile	5,13		7,85		8,18	
Nachteile	3,88		5,54		5,55	
Bilanz		1,25		2,31		2,63
Fremdbestimmte						
N = 12	D 1		D 2		D 3	
Vorteile	7,11		7,36		6,73	
Nachteile	6,00		4,55		5,50	
Bilanz		1,11		2,81		1,23

Abschließend sei noch kurz auf die inhaltlichen Nennungen an Vor- und Nachteilen eingegangen.

Bei allen Befragungszeitpunkten werden am häufigsten als *Vorteile* "Reisen"

benannt, gefolgt von einer "sinnvollen Freizeitgestaltung". Auffallend ist der hohe Stellenwert an physischen Aspekten zu D1: die Befragten geben häufig als Vorteile eine "gute Körperhaltung", sowie allgemein "gesundheitliche Vorteile" an; zu D3 hin verschwinden diese Aspekte aus der Vorteilsliste. Sie tauchen jedoch nicht in besonderer Weise in der Nachteilliste auf.

In der Benennung von *Nachteilen* treten besonders zeitliche Aspekte hervor, danach folgen Einschränkungsempfindungen in jugendaltertypischen Freizeitmöglichkeiten bzw. Defizite in der schulischen und beruflichen Ausbildung. Häufig werden auch Einschränkungen im sozialen Kontakt, insbesondere dauerhaften Freundschaften benannt.

Eine abschließende Einordnung und Interpretation der dargestellten Ergebnisse fällt schwer. In Erinnerung bleibt sicher das bereits erwähnte "Jugendalter-Motivationsloch", das im Zusammenhang mit gehäuften Karriere-Abbrüchen im Jugendalter steht, aber auch eine kognitiv-motivationale Rechtfertigungshaltung abbilden könnte. Deutlich hervorzuheben sind *geschlechts-* als auch *sportartspezifische Unterschiede* im Motivationsprofil der jugendlichen Leistungssportler. Wie bei so vielem im Leben mag auch hier der Grundsatz Gültigkeit haben: "von jedem etwas - auf die richtige Mischung kommt es an": Wer bei der ganzen Sache nur das Positive sieht, wird schnell ernüchtert sein und dann dazu neigen, die Nachteilaspekte überzubewerten und dem hochleistungssportlichen Engagement zunehmend ablehnend gegenüberzustehen.

EXPRESSED VALUES AMONG JUNIOR BRITISH FOOTBALL PLAYERS

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Introduction

Considerable concern has been voiced in recent years over the conduct of participants in sport and has spread to include both the conduct of, and behaviour in, children's sport. This concern is reflected in the increasing attention being shown in the problem by researchers and national agencies for sport. The Council of Europe has expressed its interest and is supporting research which examines value systems among young participants in sport in twelve participating nations.

Research into the perceived decline in sportsmanship and fairplay has been hampered by lack of conceptual clarity and agreement on the operational definition of the phenomena. They may be referred to as behaviour, attitudes, or values. Further the problem may be approached as one of motivation, moral judgment, moral behaviour, or moral development. Hence there is a need for conceptual clarification as a prerequisite of a comprehensive understanding of the issues involved.

This research adopts the concept of value as the core construct underlying behaviour. Values are considered to be beliefs about what is desirable and occur frequently in the literature of fairplay. Indeed the notion that sport is an effective medium for the development of desirable social and moral values has long been advanced by physical educators, though without a great deal of evidence to support it.

A most influential approach to values has come from Rokeach (1973) who defined a value as:

> ... an enduring belief that a specific mode of conduct or end-state of existence is preferable to an opposite or converse mode of conduct or end state of existence. (Rokeach, 1973, p. 5).

Since people possess a range of values they are organised into systems which reflect their relative importance. Hence a value system is defined as:

> ... an enduring organisation of beliefs concerning preferable modes of conduct or end-states of existence along a continuum of relative importance (Rokeach, 1973, p. 5).

This conceptualisation recognises instrumental values, concerned with behaviour,

and terminal values, concerned with goals. Rokeach also proposes that values have either a personal or interpersonal focus. A typology developed from Rokeach (1973) indicates four types of values of which moral values are only one (see Table 1).

Table 1. Classification of values by scale and dimension (derived from Rokeach, 1973).

	Value Type	
	Terminal	Instrumental
Interpersonal:	Social	Moral
Intrapersonal:	Personal	Competence

Rokeach's conception of values suggests that a few values underpin a wide range of attitudes and behaviour. Further a particular form of behaviour may be initiated by different values or a particular combination of values represented in one's value system. Thus, in a sporting context, a team member may conform to group expectations because he or she values team cohesion and so try to gain unfair advantage despite a personal judgement that cheating is wrong. Alternatively another may value winning to such an extent that cheating is personally acceptable despite group expectations not to cheat.

Because values underlie the organisation of behaviour it is important to identify values among young athletes in order to understand better the processes by which they make decisions about their behaviour in sporting situations. Any such research should examine those values which are salient to the situation under investigation. Hence this project seeks to identify values which are salient to young participants in competitive sports.

Football is a suitable target sport because it meets the criteria of (a) mass participation, (b) high public profile, (c) providing situations in which values may be clearly in opposition, (d) being identified as stimulating unfair play, and (e) commonly played in the participating European countries.

The purpose of the project was to identify value constructs exhibited by British club football players between 12 and 16 years of age.

Method

Subjects

Subjects were competitive male football players (N=60) between 12 and 16 years of age (see Table 2).

Table 2. Distribution of subjects by age group.

Age	12	13	14	15	16	Total
Number of Subjects	12	11	14	12	11	60

Data were collected by a semi-structured discussion of two hypothetical dilemmas which might occur in football. Stimulus situations permitted the discussion of (a) instrumental, (b) aggressive, and (c) altruistic behaviour. Six dilemmas were developed and were randomly assigned to subjects to elicit the maximum range of values available.

For each dilemma subjects were asked to consider three levels of response: (a) what most people would do, (b) what their playing partners would do, and (c) what they themselves would do. At all times subjects were encouraged to explain the reasoning behind their conclusions.

Procedure

Interviews were recorded using micro-cassette recorders and later transcribed to facilitate content analysis. Subjects were asked to read the hypothetical dilemma and the interviewer checked subjects' comprehension of the situation described before proceeding with the interviews.

Data Analysis

Value categories were initially developed from pilot interviews (N=7). Additional values were added after discussion by the researchers of responses which did not fit existing categories. In order to control for experimenter bias random samples of transcripts were independently coded by both researchers on three occasions. The reliability of coding was expressed as a percentage of total values classified similarly by both researchers (mean = 81.3%).

Results

As a result of the coding process 18 values were identified (see Table 3). These represent first order constructs and no attempt was made explicitly to develop a second order classification. It is clear that many values emerged which appear to be specific, or particularly salient, to sport, e.g. Sportsmanship, Good Game.

Table 3. Expressed values identified from football and tennis players aged 12-16 years.

Value	Descriptor
1. Accepting:	Being able to get along with other despite differences between each other.
2. Achievement:	Being personally or collectively successful in play.
3. Caring:	Showing concern for other people.
4. Companionship:	Being with friends with a similar interest in the game.
5. Conformity:	Conforming to the expectations of others in the team.
6. Conscientious:	Doing one's best at all times, and not letting others down.
7. Contract Maintenance	Supporting the essence of agreeing to play the game, to play in the spirit of the game.
8. Enjoyment:	Experiencing feelings of satisfaction and pleasure
9. Equity/Fairness:	Not allowing an unfair advantage in the contest/judgement.
10. Good Game:	Enjoying the contest regardless of outcome, usually embodying a balance between the contestants.
11. Health & Fitness	Becoming healthy as a result of the activity, and in becoming fit to enhance performance.
12. Obedience:	Avoid punishment, being dropped, sent off, suspended.
13. Public image:	Gaining approval of others.
14. Sportsmanship:	Being of good disposition, accepting bad luck with the good, demonstrating positive behaviours toward opponents, and accepting defeats.

(cont.)

(Table 3, cont.)

Value	Descriptor
15. Self-Actualization	Experiencing the activity for its own sake-and accompanying transcendent feelings.
16. Showing Skill:	Being able to perform the skills of the game well
17. Team Cohesion:	Doing something for someone else, for its own sake, doing it for the team performance
18. Winning:	Demonstrating superiority in the contest.

A frequency distribution (Table 4) revealed that while values associated with competence (Achievement, Conscientious, Winning) are prominent, values associated with the quality of the sports experience (Enjoyment, Good Game, Self-Actualisation) and with moral values (Sportsmanship, Contract Maintenance, Equity) are also strongly in evidence.

Table 4. Frequency of value expression.

Value Label	Frequency	% Freq.
Accepting	2	2.3
Achievement	43	49.4
Caring	56	64.4
Companionship	44	50.6
Conformity	17	19.5
Conscientious	41	47.1
Contract Maintenance	52	59.8
Enjoyment	78	89.7
Equity/Fairness	53	60.9
Good Game	45	51.7
Health & Fitness	9	10.3
Obedience	46	52.9
Public Image	49	56.3
Self-Actualisation	31	35.6
Showing Skill	22	25.3
Sportsmanship	73	83.9
Team Cohesion	33	37.9
Winning	83	95.4

The most noticeable feature of the data obtained is the appearance of values which differ from those identified in previous research (e.g. Braithwaite, 1982; Rokeach, 1973; Schwartz & Bilsky, 1987) and which are particularly salient to sports

settings. This highlights the importance of following the advice of Braithwaite (1982) to identify salient values from the population of interest.

The identification of value domains by Schwartz and Bilsky (1987) appears to receive support from the data reported here. Both achievement and prosocial values are strongly in evidence. It would be unusual if participants in competitive sport did not value achievement yet the frequency of occurrence of social and moral values in discussing sports dilemmas is encouraging. More than 80% of subjects considered Sportsmanship to be important and a significant majority expressed the importance of Contract Maintenance and Equity. Further evidence for the levels of altruism existing within this sample can be found in a clear concern for the welfare of others. Given the high frequency of occurrence of both achievement values and moral values the relative importance of different value domains in the hierarchical value structure of each individual becomes the critical factor which determines behaviour in a given situation.

This study also reinforced the importance of the pleasure to be gained from sports participation. While most young people experience difficulty in articulating what it is that they enjoy about sport, they feel it very strongly. Thus the value Enjoyment is supported by others which may represent the same sentiment, e.g. Self-actualisation, Companionship, Showing Skill. Recent research indicates that children have different achievement goals which relate to sports participation (Duda, 1987; Whitehead, 1990) and it is reasonable to suggest that their attainment is a constituent of enjoyment. Certainly adults who provide sports experiences for children should be aware of the value systems which draw children to sport, recognise that they may be fundamentally different from those which they hold themselves, and try to meet the needs which they represent.

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ZUR MOTIVATION IM SPORT UND SPORTUNTERRICHT VON AUSZUBILDENDEN

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Im Rahmen eines Forschungsprojektes zur Effizienz des Berufsschulsports wurden an der Universität Potsdam Untersuchungen zur Motivation von Auszubildenden zum Sporttreiben durchgeführt.

Es sollten folgende Fragestellungen beantwortet werden:

1. Welche Gründe gibt es, daß Auszubildende am freiwilligen Sport teilnehmen?

2. Welche Beweggründe veranlassen eine Abstinenz im Sport?

3. Welche Rolle spielt der obligatorische Sportunterricht bei der Motivation?

Untersuchungsdesign

Die Untersuchungspopulation setzte sich aus 203 männlichen und 244 weiblichen Auszubildenden der verschiedensten Berufsgruppen an acht Bildungseinrichtungen des Landes Brandenburg zusammen.

Als Methoden kamen ein selbstentwickelter Fragebogen und modifizierte Ratingskalen zur Selbsteinschätzungen von Befindensveränderungen (Ziezow, 1990) zum Einsatz. Die Untersuchungen wurden in den Jahren 1989/1990 durchgeführt.

Untersuchungsergebnisse

1. Die Abbildung 1 verdeutlicht, daß 95% der Befragten Sport treiben, weil es ihnen Freude macht. Bei 86% steht das Bewegungsvergnügen im Vordergrund. Auch dem Gesundheitsmotiv wird ein gebührender Platz eingeräumt.

Bedeutungslos scheint dagegen das Motiv "Sporttreiben um der Anerkennung willen". Zwischen Jungen und Mädchen existieren keine nachweisbaren Differenzen in den Aussagen.

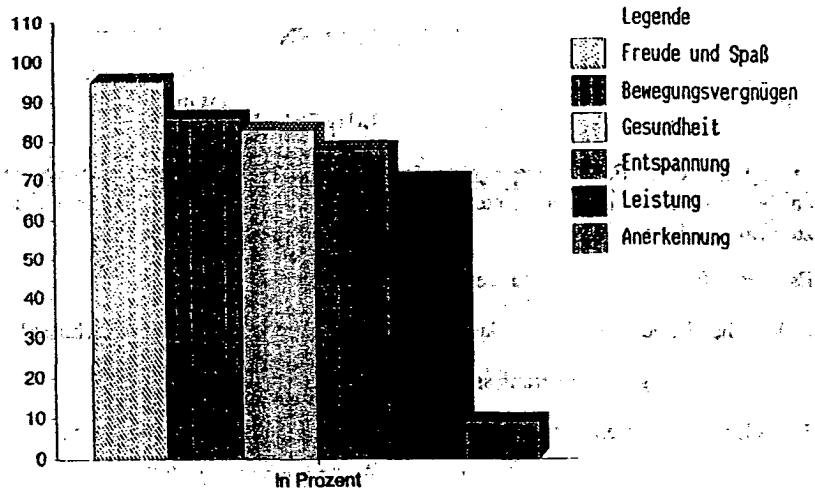

Abbildung 1. Motive zum Sporttreiben.

2. Da bei den Auszubildenden die überwiegende Mehrzahl keinen Sport betreibt, waren die Beweggründe für diese Abstinenz näher zu beleuchten. Auch hier kommt der Freude eine deutliche Dominanz zu (Abbildung 2). Die 16-18jährigen führen in der Freizeit vorwiegend Tätigkeiten aus, bei denen sie Spaß und Freude empfinden. Mit dem Sport haben relativ viele negative Erfahrungen gemacht und bleiben ihm deshalb fern. Die große Interessenvielfalt und die hohe Beanspruchung durch Schule und berufliche Ausbildung tragen dazu bei, daß die Prozentzahl der Nichtsporttreibenden gegenüber dem Schulalter deutlich zunimmt. Diese Tendenz konnte auch in früheren Untersuchungen registriert werden (Budzisch & Behm, 1990; Dreblow, 1990).

Auch die häusliche Beanspruchung, besonders bei den Mädchen, ist ein Faktor, nicht Sport zu treiben.

3. Bei den Ratingskalen entsprechen Skalenwerte zwischen 4,5 und 6 einer guten Motivation. Die männlichen Auszubildenden gehen fast unabhängig von der zu erwartenden Sportart mit einer guten Motivation in den obligatorischen Sportunterricht (Abbildung 3). Bei den Mädchen sieht das Bild viel differenzierter aus. Sie sind nur vor dem Schwimmen positiv motiviert. Bei den Spielen und dem Gerätturnen kann man immerhin noch von befriedigender Motivierung (4,15 bzw. 4,26) ausgehen, zur Leichtathletik dagegen kommen sie zumeist schlecht bzw. negativ motiviert.

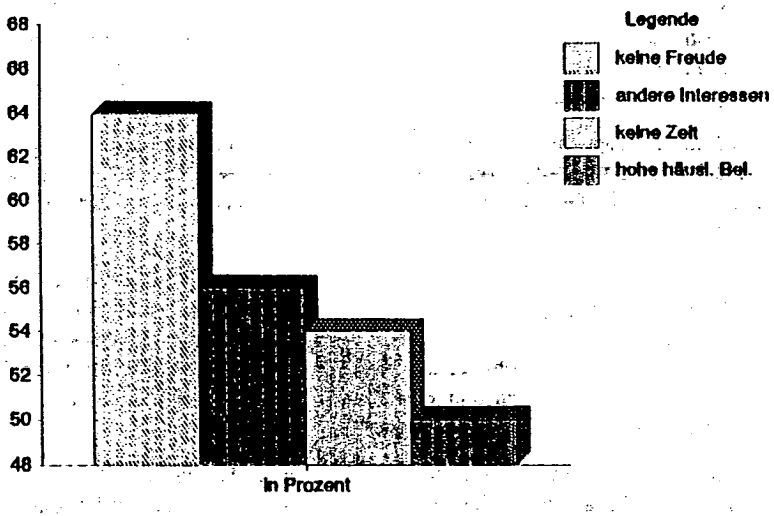

Abbildung 2. Motivation gegen Sport.

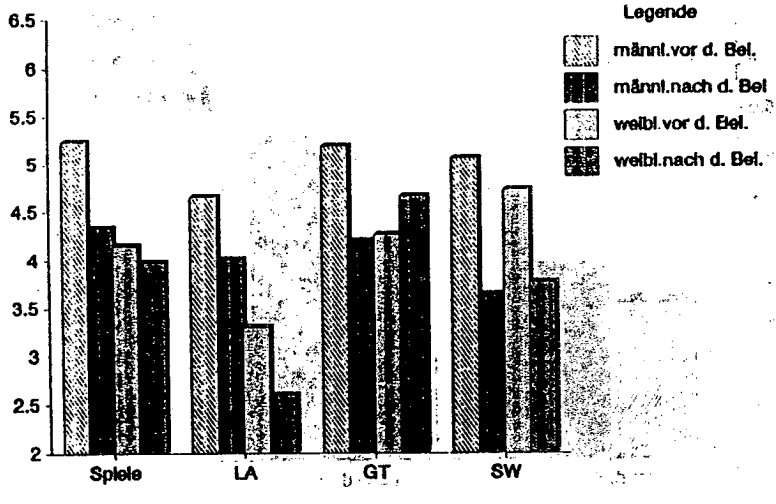

Abbildung 3. Motivation. Vergleich männlich-weiblich.

4. Nach dem obligatorischen Sportunterricht ist bei den Jungen und Mädchen ein Abfall der Motivation zu erkennen. Dafür wurden zwei Gründe festgestellt: einerseits der oft freudlose Unterricht, zum anderen aber auch, wie z.B. beim Schwimmen, die für die Auszubildenden hohen Belastungen, die ein weiteres Sporttreiben nicht in jedem Fall möglich machen.

5. Signifikante Unterschiede in der Motivationsveränderung traten nur im Gerätturnen auf. Hier kam es sogar zur Verbesserung der Motivation bei den weiblichen Auszubildenden. Die Gründe lagen vor allem in der Struktur der Sportart, die dem weiblichen Organismus entgegen kommt.

6. Durch die Veränderung der Inhalte und der methodisch-didaktischen Unterrichtsführung war es möglich, wesentliche Veränderungen der Motivation in positiver Richtung zu erreichen. Die Abbildung 4 zeigt dies am Beispiel eines 1. Lehrjahres von männlichen Auszubildenden in der Sportart Gerätturnen. Im normalen Unterrichtszyklus gibt es auch hier einen Abfall der Motivation von gut vor der Stunde zu befriedigend nach der Belastung.

Durch alternativen Gerätturnunterricht - darunter verstanden wir neue Formen wie: Hindernisturnen, Trampolinspringen, Wettbewerbsformen, Partnerübungen und Pyramidenbau - konnte eine Umkehrung erreicht werden. Es kam zu einer signifikant verbesserten Motivation zum Gerätturnen, die sich auch darin ausdrückte, daß die Motivation vor der Sportstunde von Woche zu Woche positiver wurde.

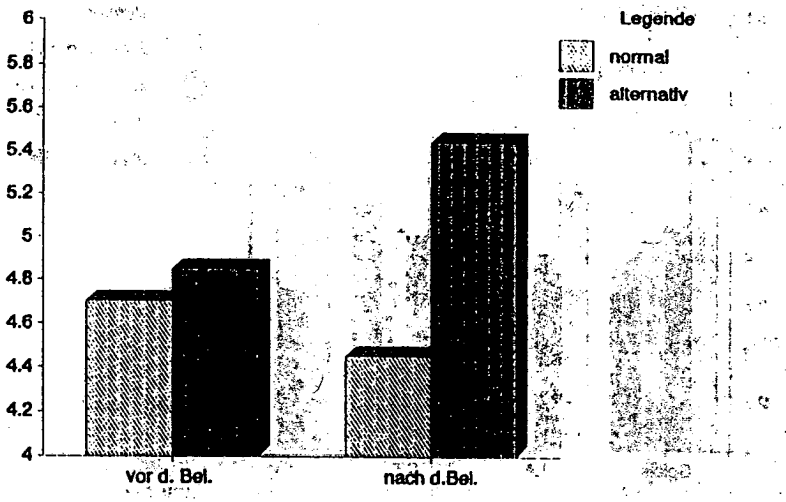

Abbildung 4. Motivation männlicher Gerätturner.

Schlussfolgerungen

Die rückläufige Tendenz der freizeitlichen Sportaktivitäten von Jugendlichen zwischen 16 und 18 Jahren basiert in erster Linie auf einen an den Interessen und Bedürfnissen der Jungen und Mädchen vorbeigehenden Übungsbetrieb in den Vereinen und Sportclubs.

Positives emotionales Erleben als wichtigste Grundlage einer festen Bindung und inneren Beziehung zum Sporttreiben muß von Kindheit an bis zum Jugendalter von Sportlehrern, Übungsleitern und Trainern immer wieder neu organisiert werden.

Der obligatorische Sportunterricht bildet für viele Kinder und Jugendliche den Ausgangspunkt zur Hinwendung oder Abstinenz vom Sport. Sich dieser Funktion bewußt werden, heißt, didaktisch-methodisch in jeder Sportart bzw. Disziplin ein Höchstmaß an Emotionalität zu gewährleisten.

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4

Motivation und Wettkampfsport
Motivation and Competitive Sport

COMPETITION AND MORAL LEVEL OF BEHAVIOUR IN ATHLETES

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The relationship between sport involvement and various dimensions of moral behavior has been investigated only occasionally. In some studies a positive correlation between sport activity and moral reasoning was found. There is much more evidence, however, that sport participation may be negatively related to moral growth. Such conclusion can be found in Bredemeier's work (e.g. Bredemeier, 1985; Bredemeier & Shields 1984; Bredemeier, Weiss, Shields & Cooper, 1986). Different theoretical assumptions support this result.

Both in the structural and humanistic approach to moral development the role of social experiences is stressed. What seems crucial in social experiences of athletes competition. When it is treated as a struggle against others, it concentrates the attention of an individual on its own ego, what restricts the power of other values. The excessive competition can lead to conviction that success (own success) is the highest value. At the same time it arouses the feeling of threat, what - in turn - again increases the tendency to ego concentration. It seems obvious that ego-centered personality can't promote moral growth. According to Maslow, when the deficiency needs are deprivated, the growth need can't reveal.

All people have a lot of competitive experiences, those involved in sport activity, however, have much more of them and more intensive. Does it hurt their morality? This study was designed to determine if persons highly involved in competition are lower in moral reasoning and moral behaviour. As the most salient moral problem of the contemporary sport are doping practices, this topic was used (to explore, by the way, some other questions).

Method

The subjects were 210 male and female students of the Academy of Physical Education in Warsaw (mean age 21 years). 56 of them never did any sports. The others were active athletes, representing a broad range of different sports (individual and group disciplines; of high and low physical contact). Their training period differed from 1 to 15 years, and their sport level was also highly differentiated - according to formal polish classification from having no sport class (no outstanding results) to international master class. More detailed data on subjects sport experiences can be found in Table 1.

The students have been tested by the Moral Dilemma Questionnaire, providing information on moral reasoning level, constructed according to Kohlberg's rules of moral judgement assessment (Colby, Gibbs, Kohlberg, Speicher-Dubin & Condee, 1980). The questionnaire presented a dilemma of a wrestler, knowing his rivals use anabolic steroid. Should he also take the forbidden drug or should he play fair? The dilemma followed by six questions was administrated in a written form. The answers were scored independently by two raters. Additionally the subjects were asked to put themselves in the wrestler's position and to answer on 7-points scales whether they would take the drug and if they would confess taking the drug to reduce feelings of guilt.

The subjects completed also the Semantic Differential Scales, assessing attitudes toward competition, and the Attitudes toward Doping Questionnaire. Next all were tested by the Resistance to Temptation Test, giving them the opportunity to behave honestly (following the rules) or to transgress rules and cheat in purpose to obtain better scores in drawing tasks. The test consists of 10 trials, grouped in two series: labyrinths and circles. All tasks should be performed with the eyes closed. According to an old idea of Hartshorne and May (1930) it was impossible to do it without errors, unless looking furtively. The probability of performing with 0,1,2,3 and more errors with eyes tied up had been established before and it was the base for scores for cheating.

Befor subjects were tested by a battery of well known personality questionnaires, such as Cattell's, Eysenck's, Buss, Durkee's, Spielberger's, Rotter's, Marlowe - Crown's and some others.

Results

All results chosen for presentation are gathered in Table 1 (and all difference and relationships that will be mentioned in text are significant on at least .05 level).

Sex Differences. Male and female subjects don't differ in years of sport participation and in sport level. There are differences in attitudes to competition and in attitudes toward doping - in both cases men's attitudes are more positive. Men and women don't differ in reports on their expected reactions to doping temptation. In case of imagined drug abuse women declare stronger inclination to confess the fact. The moral reasoning level is higher in female sample, at the same time women cheat more.

Competitive experience. Time of sport participation and sport level differ neither the attitude toward competition nor toward doping. There are also no differences in expected taking drugs, but there are some differences in expected confessing the offence - in general, the participants with longer experience and those with better

results are less inclined to confess the offence. Moral reasoning level is similar in all groups, but moral conduct differs. More detailed analysis showed that the highest scores in cheating occur more frequently in the group with relatively high training period - but not the highest! The group with relativly low training period was cheating less than others. The non-participants and athletes with the longest experience were performing test partly honestly, partly cheating a lot. The last group has employed an interesting behavior pattern: at the beginning according to the rules (honestly), later - cheating. It looks like testing the situation first. When subjects had discovered it is possible to cheat safeley, they did it.

The relationship between the sport level and cheating is very similar: the athletes with first class cheated more than athletes with master class and more than athletes without any class. This was true both for the labyrinths and circles tests. In addition in the circles trials athletes with the second class and non-athletes also cheated more than athletes without class.

Again we can see that the highest scores in cheating occur in the group with relatively high sport level, but not the highest. The low sport level group (but not the lowest) is the most resistant to temptation. The total score of master's group is also low, indicating honest performing, but scores gained in particular tasks are less stable. The results suggest the curve-linear (the reversed U-type) relationship between the amount of competitive experience and resistance to temptation, but the smal size of master sample doesn't allow to state it definitely.

Attitude toward competition. In the total sample the attitude toward competition is highly positive and is not related to any of presented indexes of moral reasoning and behaviour, neither to expected behaviour in doping temptation. However, it is related to cheating in two labyrinth tasks - subjects with the medium positive attitude were cheating more frequently, while the less positive attitude was more frequent in no-cheaters.

Attitude toward doping is also related to cheating: subjects positive and ambivalent to drugs cheated more frequently in both tests. It should be noticed, however, that those who declared stronger restrain from drugs also cheated more in labyrinths. Labyrinth cheaters declare more frequently they would confess taking drugs, while circles cheaters declare they wouldn't. It becomes less surprising when we notice that the Resistance to Temptation Test measures not only the intensity of cheating tendency (total RT score) - it shows the dynamics of reaction to temptation as well. Analysing the sequence of particular tasks scores we can divide several types of cheaters, e.g. total - partial, consequent - hesitating, gambler - hedger. As was said before, many of master level athletes represent the hedger type; they cheat, but with great caution. Unfortunately, there is no possibility to present such more detailed analysis here.

Summary and Some Comments

The competitive experience, depending on the sport level and time of training period, seems to be highly related to moral behaviour of athletes. It is true for the situation in which cheating in purpose to obtain better results is possible, easy and safe. It should be stressed that "better results" concern a completely unimportant field of activity, without any visible consequences for subjects. At the same time cheating wasn't visible harmful to anybody. It looks like a motivational habit "to be better" or "not to be worse" and is not surprising for people who compete day by day for many years. But an important limitation must be noticed: the relationship between competition and cheating is not linear. It breaks down for the athletes with very long training period and with master class. The factors that restrain the negative impact of competition and at the same time promote the successful drive to be the best should be found out in further studies. The personality variables that were analysed give an interesting hint: masters, when compared to I and II class athletes, are more neurotic, and more introverted, more resentful and suspicious, also more anxious. All this traits can be associated with the worse adjustment syndrom.

The competitive experience is more important for the moral behavior of athletes than the attitude toward competition, although the latter is not irrelevant to the matter.

The moral reasoning about hypothetical dilemma set in sport-specific situation is not related to competitive experience, neither to attitude toward competition. It is also not related to cheating, although in the female sample there is a tendency for cheater to be higher in moral reasoning. Such finding can look paradoxical, but in the light of many studies, done and cited by Kohlberg (1973), the link between level of moral reasoning and moral conduct is not very strong. According to Mischel and Mischel (1976) knowledge of individuals moral reasoning would permit to predict no more than 10 percent of the variance in their moral behavior.

In the study presented here the different manifestations of athlete's morality are consitent as long as they concern subjects' declarations (e.g. attitude toward doping and expected behavior in drugs temptation). But when comparing the declared reaction to temptation with the actual behavior, the consistency disappears.

The study has shown that the area of moral functioning of athletes can be an interesting field of research. Further work is needed to establish more precisely the relationship between different aspects of morality and sport involvement. The impact of sport participation on moral growth can't be ignored as long as we are talking on *Health Sport*.

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MOTIVATION AND FIELD DEPENDENCE OF MALES AND FEMALES ENGAGING IN TEAM AND INDIVIDUAL SPORTS

TERRY MCMORRIS AND PHILLIP COBB, ENGLAND

Introduction

The purpose of this study was to compare the achievement motivation, affiliation motivation and field dependence of men and women engaging in team and individual sports. The study also examined the relationship between field dependence and type of motivation.

While affiliation motivation, the desire to participate in order to interact with others, is simple to define, achievement motivation is less easy. Roberts (1984) has divided achievement motivation into two sub-categories, which he calls competence motivation and mastery motivation. Roberts (1984) described competence motivation as being characterised by a desire to win or to perform well in comparison to other athletes. Mastery motivation, according to Roberts (1984) is demonstrated by an intrinsic desire to perform to the best of one's ability regardless of outcome.

As team sports require members to co-operate with each other, it would appear reasonable to hypothesise that team sport participants would be more motivated by affiliation than athletes participating individually. Whether or not a difference exists for achievement motivation between the groups is open to conjecture as both may be equally motivated to achieve. Gender differences may be found for both affiliation and achievement motivation as previous research has found males to be less motivated by affiliation and more motivated to achievement than females (Flood & Hellstedt, 1991).

Differences in field dependence between team and individual sports performance has been examined by Pargman, Schreiber and Stein (1974) and Pargman (1977). These authors expected to find that team sport athletes were more field dependent than athletes engaging in individual activities. The theory of a field dependent cognitive style was developed by Witkin and his associates (Witkin, Dyk, Faterson, Goodenough & Karp, 1962; Witkin, Goodenough & Oltman, 1979; Witkin & Goodenough, 1981). It is a continuum theory with on the one hand field dependent individuals and at the other extreme field independent people. Pargman et al. (1974) and Pargman (1977) based their hypothesis on Witkin's contention that field independent people are socially independent , have a sense of separate identity and have limited interpersonal competencies, whereas field dependent

people are socially aware and are affected more by the social environment than are field independent people (Witkin et al. 1962; 1979).

The findings of Pargman et al. (1974) and Pargman (1977) supported the hypothesis for male athletes but not for female athletes. Indeed the female team athletes in Pargman's (1977) study were more field independent than the female athletes engaged in individual activities. Pargman (1977) also found that his female subjects were more field independent than their male counterparts. This is in contrast to the general trend for the non-athlete population as reported by Witkin, Oltman, Raskin and Karp (1971), where males have been consistently found to be more field independent than females.

The present study attempted to not only examine the possibility of differences in motivation and field idependence of male and female team and individual athletes but also to examine the possibility of a relationship between field dependence and type of motivation. As field dependent individuals are socially aware and dependent on others it was hypothesised that there would be a significant correlation between field dependence and affiliation motivation. The possibility of a relationship between achievement motivation and field dependence was also examined.

Method

The subjects were college athletes competing in female team sports (N=18), female individual sports (N=10), male team sports (N=13) and male individual sports (N=13). Achievement and affiliation motivation were assessed by the Howe Sport Behaviour Scale (Howe, 1976). Field dependence was determined by the Group Embedded Figures Test (Oltman, Raskin & Witkin, 1971).

Results

Mann-Whitney U-tests demonstrated that male team athletes showed significantly ($p<0.05$) greater affiliation motivation than male individual athletes. The male team athletes were also significantly ($p<0.01$) more motivated by achievement than the individual athletes. There were no significant differences between the female groups. Comparisons, regardless of gender for team and individual athletes showed that the team athletes were significantly more motivated by both achievement ($p<0.01$) and affiliation ($p<0.01$) (Table 1).

Student 't'-tests showed that there were no significant differences between any of the groups for field dependence scores. Spearman rank order correlation between achievement motivation and field dependence, and affiliation motivation and field

dependence were low and non-significant.

Table 1. Mean scores for affiliation motivation, achievement motivation and field dependence of male and female team and individual athletes.

	Achievement	Affiliation	Field Dep.
Female individual	50.7	52.4	14.6
Female team	48.7	56.1	12.38
Male individual	46.9	53.2	13.9
Male team	52.5	56.2	11.44
Individual	48.6*	52.87*	13.78
Team	50.94*	56.16*	12.39
Male	50.16	54.97	13.03
Female	49.61	54.48	13.35

* $p<0.01$

Discussion

The results for differences in affiliation motivation between team and individual athletes provided partial support for the hypothesis that team athletes would demonstrate greater affiliation motivation than individual athletes. Results, regardless of gender, and the findings for male athletes support the hypothesis while those for females did not. It should be noted, however, that the difference in female scores were approaching significance.

One would expect the team situation to provide more opportunities for affiliation than situations encountered by individual athletes. The individual athlete, however, rarely competes in isolation and it may be that, to some extent, affiliation needs can be met by other competitors, coaches and supporters.

The results concerning achievement motivation showed that team athletes were more achievement motivated than individual athletes. To some extent this finding can be explained by the nature of the Howe Sport Behaviour Assessment Scale (Howe, 1976). This questionnaire includes both competence and mastery motivation factors under the heading of achievement motivation. The emphasis, however, is on competence motivation. It would appear that the opportunity to demonstrate competence, by winning or league standings, is more readily available in team sports than in individual activities where mastery, i.e. achieving a personal best regardless of how this compares with other competitors, may be a stronger motivator for most of the competitors.

The data concerning field dependence fail to support the hypothesis that team sports performers would be more field dependent than athletes engaging in individual activities. These findings are in disagreement with Pargman et al. (1974) and Pargman (1977). One would expect field dependent individuals to favour team sports where the social interaction would presumably be greater than in individual sports. However, as stated above concerning affiliation motivation, the individual activity is not undertaken in isolation and the field dependent individual need not feel isolated.

Another factor affecting this result is the nature of field independence. The field independent persons' ability to focus on his/her own needs is not affected by those around them (Witkin et al. 1962; 1979) therefore such a person can operate happily in a team situation. Teammates may perceive field independent athletes as not being good team members but this would have little or no effect on the satisfaction felt by the field independent team member.

The failure to demonstrate significant correlations between field dependence and achievement and affiliation motivation was somewhat surprising, particularily for affiliation motivation. The results, however could be contaminated by the fact that the majority of the subjects fell into the centre of the field dependent - independent continuum, thus not exhibiting the extremes of either cognitive style (Witkin et al. 1971). The fact that some field independent people can operate in a field dependent mode when the situation suits them (Goodenough, 1976) could also have affected the results concerning affiliation motivation. As far as achievement motivation is concerned, it is possible that both field independent and field dependent individuals could have equal need for achievement but coming from different perspectives. The field independent athletes may need achievement to feel good about themselves while the field dependent person may need achievement to feel accepted by significant others.

The failure to find gender differences in field dependence was in disagreement with Witkin et al. (1971) and Pargman (1977). As field dependence is thought to be a result of childhood experiences and education (Witkin, Goodenough & Karp, 1967) it is possible that these findings are due to recent changes in society's attitude to the education of girls, resulting in young women developing a stronger sense of self identity than in the past. Similar reasons could also account for the failure to find gender differences in type of motivation.

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DROPOUT-PROBLEMATIK IM FRAUENLEISTUNGSSPORT

EINE LÄNGSSCHNITTUNTERSUCHUNG AN LEICHTATHLETINNEN

GABY BUSSMANN, DEUTSCHLAND

Dropouts werden im folgenden Kontext definiert als Sportlerinnen, die ihre leistungssportliche Karriere vor dem Erreichen ihres möglichen Leistungshöhepunktes beendet haben (vgl. Hahn, 1983, S. 110). Grundsätzlich handelt es sich bei dem Dropout-Phänomen um ein internationales und sportartenübergreifendes Problem. Zu dieser Thematik liegen in den Individualsportarten bereits einige Studien vor (vgl. Gabler, 1981; Kaminski, Mayer & Ruoff, 1984; Mayer, 1989; Sack, 1980), es besteht jedoch weiterhin in den Mannschaftssportarten und besonders im Frauenleistungssport ein Forschungsdefizit. Allen bislang vorliegenden Arbeiten ist gemeinsam, daß das Dropout-Problem als ein komplexes Bedingungsgefüge gesehen wird, dem eine Vielzahl von Ursachen und deren Kombination zugrunde liegen.

Ich gehe davon aus, daß ein vorzeitiger Karriereabbruch als kritisches Lebensereignis anzusehen ist, das einer physischen und psychischen Bewältigung bedarf. Dies gilt insbesondere dann, wenn der Karriereabbruch ungeplant erfolgt und als Mißerfolg einer sportlichen Laufbahn erlebt wird. Im Gegensatz zum Rückzug aus dem Leistungssport dürfte hier das Erleben von Versagen und negativer Gefühlszustände überwiegen. Insgesamt 51 C-Kader Athletinnen des Deutschen Leichtathletik Verbandes (DLV), die in ihrer Altersklasse der 16 - 18-jährigen die bundesdeutsche Leistungsspitze darstellten, wurden 1985 erstmalig untersucht (Stichprobe 1). Diese Erhebung erfolgte mit standardisierten und normierten Meßinstrumenten (das Freiburger Persönlichkeitsinventar, der Leistungsmotivationstest und das State-Trait-Angstinventar), die aufgrund der vorliegenden Normen auch diagnostische Informationen über einzelne und/oder die gesamte Stichprobe lieferten (vgl. Bussmann & Dodt, 1986). Die Zweiterhebung erfolgte 1989, wobei das Untersuchungsinstrumentarium um einen Fragebogen zur sportlichen und beruflichen Entwicklung erweitert wurde. Außerdem erfolgten halbstandardisierte Interviews mit den Athletinnen über ihre Einstellungen und Erfahrungen im Training und im Leistungssport, über ihre weiteren Perspektiven und - im Falle der Dropouts - über ihre subjektive Wahrnehmung und Verarbeitung des vorzeitigen Karriereabbruchs. Ergänzend dazu wurden 1989 weitere 50 C-Kader Athletinnen des DLV (Stichprobe 2) befragt, die als Vergleichsgruppe dienen und Aussagen über 2 Sportlerinnen-Generationen ermöglichen.

Nach eigenen Aussagen haben bis Ende 1989 16 Athletinnen ihre Karriere bereits aufgegeben und weitere 13 müssen als potentielle Dropouts bezeichnet werden, da

sie weder über eine positive Leistungsentwicklung in der Vergangenheit berichten können, noch sich als optimistisch für die Zukunft bezeichnen. Eine Analyse der objektiven Situation dieser Athletinnen (Gesundheitszustand, Bestleistungen, Trainingszustand u.ä.) verdeutlicht, daß alle mit relativ großen und/oder vielen Problemen unterschiedlichster Art belastet sind, die keine positive Leistungsentwicklung in näherer Zukunft erwarten lassen.

Der Vergleich der bisherigen Leistungen (Verbesserung der Bestleistung über die Jahre), Erfolge (Teilnahme und Plazierungen bei Meisterschaften) und der leistungssportlichen Ziele (bezogen auf nationale und internationale Meisterschaften) verdeutlicht, die Dropouts eine etwas ungünstigere Leistungsentwicklung hatten und seltener eine Teilnahme bzw. Plazierung bei internationalen Meisterschaften anstrebten. Die Prüfung weiterer sportlicher Umfeldvariablen (Betreuung, Trainingsgruppe, Sportorganisationen) zeigt keine auffälligen Unterschiede zwischen beiden Gruppen. Das Persönlichkeitsbild beider Stichproben stellt sich als unauffällig dar, die Mittelwertprofile weisen zu allen Erhebungszeitpunkten keine größeren Abweichungen von der herangezogenen Eichstichprobe auf. Der Vergleich des Persönlichkeitsbildes zwischen Dropouts und Non-Dropouts zeigt einige Unterschiede, es läßt sich ein durchaus einsichtiges Muster konstatieren: Die späteren Dropouts zeichneten sich bei der Ersterhebung 1985 durch eine höhere überdauernde Ängstlichkeit, geringere Ausdauer in Leistungssituationen, eine ausgeprägtere emotionale Labilität und eine eher 'weibliche' Neigung zu körperlichen Beschwerden aus. Sie zeigten also weniger 'Biß' und Selbstvertrauen und waren ängstlicher, wenn es darum ging, auf Neues (Personen, Situationen) zuzugehen.

Die Analyse der Interviews zeigt, daß die Einstellung der Dropouts gegenüber der Leichtathletik und ihrer eigenen Disziplin relativ positiv ist, die Schattenseiten werden mehr am Hochleistungssport allgemein festgemacht. Auch ist die Sichtweise insofern unterschiedlich, als für die Non-Dropouts der Leistungssport als eine Herausforderung erlebt wird, während die Dropouts diese Wettbewerbssituation eher als Leistungsdruck empfanden. So schildern sie bereits bei den Mobilisationsprozessen vor dem Wettkampf mehr Probleme bezogen auf ihre psychophysische Bereitschaft zum Wettkampf hin. Mißlungene Wettkämpfe verarbeiten die Dropouts seltener emotional wie kognitiv, so daß Verbesserungs- und Veränderungschancen mit der daraus resultierenden Sicherheit für kommende Wettkämpfe weniger genutzt werden konnten. Die Dropouts erlebten ihr Umfeld nach schlechten Wettkämpfen weniger verständnisvoll als die Non-Dropouts. Insgesamt paßt dazu die geringere Identifikation der Dropouts mit ihrer Rolle als leistungssporttreibende Leichtathletin, denn nur 2 von ihnen nennen eine positive Einstellung dazu. Veränderungen in der Einstellung zum Hochleistungssport zeigen sich bei den Dropouts häufiger in der Weise, daß sie dem Hochleistungssport allgemein jetzt kritischer gegenüberstehen, so betonen sie jetzt häufiger seine Schattenseiten. Gegenüber der Sportart Leichtathletik im besonderen aber sind sie eher positiver als vorher eingestellt, was auch zu den anfangs berichteten

Ergebnissen paßt. Auffallend ist, daß die Dropouts nicht kritischer im Hinblick auf gesundheitliche Risiken geworden sind. Das Ende ihrer Karriere begründen die Dropouts vorrangig mit Verletzungsfolgen, nur in Einzelfällen werden andere Probleme genannt. Die Reaktion ihrer Umgebung wird mehrheitlich als zwiespältig erlebt, der Heimtrainer bzw. die Heimtrainerin als verständnisvoll und der Bundestrainer bzw. die Bundestrainerin als eher negativ. Wenn eine (emotional-verständnisvolle) Unterstützung erfolgte, dann kam sie aus dem direkten sozialen Umfeld (vorrangig Eltern) und von HeimtrainerInnenseite. Als Bewältigungsstrategie wurde von den Dropouts vorrangig Ablenkung durch Beschäftigung mit anderen/neuen Aufgaben genannt. Bei den Dropouts überwiegt das Bedauern über das Ende ihrer Karriere, obwohl durchaus die größere zeitliche Dispositionsfreiheit als positiv wahrgenommen wird. Dennoch wird in den Interviews deutlich, daß der Karriereabbruch - zumindest bei einigen - noch nicht ganz verarbeitet wurde. Dafür spricht zum einen die Tatsache, daß die Leichtathletik, die doch als so positiv geschildert wurde, nun weitgehend gemieden wird. Unter der Voraussetzung, daß die Dropouts sich noch in der Trauerphase über ihr Karriereende befinden, ist dies nur allzu verständlich. Was man gerne hätte, aber nicht (mehr) erreichen kann, meidet man lieber. Zum anderen zeigte sich, daß gerade die Dropouts sehr froh waren, und dies auch teilweise äußerten, sich einmal ausführlich über ihre Situation und das Ende ihrer Karriere aussprechen zu können. Die Interviews dienten somit auch ein Stück weit der psychischen Verarbeitung dieser Ereignisse. Der Vergleich der Aussagen der Dropouts mit denen ihrer HeimtrainerInnen weist mehr Übereinstimmungen als Differenzen auf.

Da die Verletzungen offenbar eine so große Rolle spielen, wurden mehrere quantitative Maße gebildet, um einen Eindruck von der Häufigkeit und dem Schweregrad der erlittenen Verletzungen zu erhalten. Zum einen wurde die bloße Anzahl der angegebenen Verletzungen pro Athletin bis zur Befragung (in 1989) addiert und zum anderen wurde aufgrund der Einschätzung einer erfahrenen Sportmedizinerin, Frau Dr. R. Gerdes, jede Verletzung nach ihrem Schweregrad, im Sinne der leistungssportlichen Betätigung, gewichtet.

Für einen Vergleich der Verletzungen zwischen den Dropouts und Non-Dropouts wurden - um gleiche Voraussetzungen zu schaffen - zwei weitere Maße gebildet. Einerseits die gewichtete Summe der Verletzungen der letzten 3 aktiven Jahre und andererseits der gewichtete Wert der zuletzt genannten Verletzung. Die statistische Überprüfung beider Gruppenwerte zeigt keine signifikanten Unterschiede. Diese Befunde sprechen dafür, daß die Ursachen für den vorzeitigen Karriereabbruch weniger in physischen Gründen (Verletzungen), sondern mehr in psychischen Gründen zu suchen sind, nämlich in der subjektiven Wahrnehmung und Interpretation der Athletinnen. Offenbar unterscheiden sich die Dropouts in der Bewertung des Schweregrads und der Überwindbarkeit von Verletzungen, weniger in den Verletzungen selbst. Die Verletzungen sind aber die faßbare, konkrete Größe, mit der sich der vorzeitige Karriereabbruch vor sich und anderen erklären und

rechtfertigen läßt. Zusammen mit den bereits berichteten psychischen Unterschieden wird hieran deutlich, daß es weniger oder nicht nur auf die 'objektive' Situation ankommt, sondern darauf, wie diese interpretiert und bewertet wird. Die Dropouts sind offenbar eher bereit gewesen, das Handtuch zu werfen als die Non-Dropouts, aber weniger weil sie stärker verletzt waren, sondern mehr weil sie die Verletzung als das endgültige Aus interpretiert haben.

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THE REASONS FOR CHOOSING COACHING AS A PROFESSION AND THE ATTITUDE TOWARDS THE WORK PRACTISED

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The Characteristics of the Tested

The present report is a fragment of a broader research on the work and profession of a coach in Poland. 361 coaches representing 19 disciplines of sport were included in the researches. It is a representative attempt. 84% have university degrees, and a vast majority of those (91%) have degrees in physical education. 86% have set families. Coaches between the age of 31 to 50 prevail (78%). In the group examined, there are only 6% of women which conforms with the state of employment of women of this profession in Poland. (It oscilates between 6% - 10%). 38% of coaches have full time jobs in sport's institutes, and 17% are employed in other forms, 45% join both coaching job with a work at school, which is their main form of employment. The most numerous group are the coaches with a 6 to 20 years of training period (65%), followed by coaches with 21-35 years of training 27%).

94% of them practised the discipline of sport they are coaching now, competitively. The fact is significant when taking into consideration the motives of choosing the profession.

The choice of profession is an extremly important and difficult decision, since it is a decision often made once for the rest of life. It is obvious, that the motives which actuate young people when choosing the profession are quite different from those that would actuate them after some years, for instance, after graduation when the profession is acquired and it is being practised. When presenting the motives for choosing coaching as a profession, the above mentioned circumstances should be taken into account.

The Results of the Research

According to the data, the main motive for choosing the profession was, and still is, the fondness of it (Table 1). How true is it? Perhaps at the moment of taking the decision, this motive was not yet well defined. It turns out that own sport achievements are strong enough to choose the profession. Therefore, this profession, among other motives, includes a very rational motive, since personal

sport successes and good results in sport exert a very positive influence on the future coaching job. Financial factors (5) as well as coincidence (5) are not very desirable motives for taking up coaching from the point of view of their later effectiveness.

Table 1. Reasons for undertaking coaching profession.

Specification	Men		Women		Total	
	n	%	n	%	n	% *
Own sport's achievements	91	25,21	9	2,49	100	27,70
Fondness of sport	313	86,70	20	5,54	333	92,24
Financial factors	19	5,26	0	0	19	5,26
Wincidence	17	4,71	0	0	17	4,71
Other	62	17,17	4	1,11	66	18,28

* Percentages are not totalled to 100. They could be used for several motivations

What are then the values that underlie the profession of a coach? The coaches themselves see the values in "educating and shaping positive moral values of men" - this is the opinion of 71,5% of coaches. 56% of them see such values as "improving health condition and physical fitness among the youth", and 41,5% in "popularizing sport" (Table 2).

Table 2. Social values of the coaching profession in self-assessment own point of view.

Specification	Men		Women		Total	
	n	%	n	%	n	% *
Improving health condition and physical fitness among the youth	193	53,46	11	3,05	204	56,51
Educating and shaping positive moral features among young people	241	66,76	17	4,71	258	71,47
Popularization of sport	143	39,61	7	1,94	150	41,55
Other	58	16,07	2	0,55	60	16,62

* Percentages are not totalled to 100. They could be used for several motivations

Is it really true that the mentioned values are representative of the profession? It is a very traditional approach, and rather the coaches' wishful thinking. The significant impact on moral values of people as seen by the coaches is also controversial. The coaches use to idealize slightly their profession, mainly on the grounds of such traditional patterns as sportsman-gentleman and later, coach-gentleman. Today the reality is different, but such findings came as a result of the predominance of older coaches brought up after different examples. Closer to the truth are those coaches who present the two above mentioned sources of their profession's values.

The attitude of the coaches towards their profession is a result of both the motive of choice and the approach towards its values. 91% of the coaches get satisfaction out of their job, including all women (Table 3).

Table 3. Attitude towards coaching profession.

Attitude towards profession	Men		Women		Total	
	n	%	n	%	n	%
Gives me a lot of satisfaction	330	91,41	22	6,09	352	97,51
I am indifferent towards it	2	0,55	0	0	2	0,55
I force myself to exercise it	4	1,11	0	0	4	1,11
Other arguments	3	0,83	0	0	3	0,83
Total	339	93,91	22	6,09	361	100,00

If we analyse the findings concerning the reasons for satisfaction from the fact of practising the profession, we can come to the conclusion that some of them are rather of irrational character. The main reason put forward by 76% of the questioned is "the satisfaction deriving from the results achieved at work". Another question arises: according to whose evaluation of the results, own or that of the authorities (Table 4).

22% of the coaches get satisfaction from the fact of "improving training methods". The remaining reasons for satisfaction can be accepted, provided the size of the groups of those coaches who approve of such opinion is taken into consideration.

From the research conducted, one can conclude, that the choice of the coaching profession in Poland has no character of negative selection, and the choice of it is made on the grounds of proper motivations and awareness of both its advantages and disadvantages.

Table 4. The reasons for satisfaction from exercising coaching profession.

Attitude towards the profession	Yes		No		No answer		Total	
	n	%	n	%	n	%	n	%
Teaching others	128	35,46	233	64,54	0	0	361	100,00
Associating with young people	133	36,84	228	63,16	0	0	361	100,00
Satisfaction from the achieves results in work	276	76,45	85	23,55	0	0	361	100,00
Perfectioning of training methods	79	21,88	282	78,12	0	0	361	100,00
Other	58	16,07	303	83,93	0	0	361	100,00

The main advantages of coaching as a profession in the opinion of the coaches themselves:

1. Working with people - its pedagogical character and attractiveness 48,6%
2. Measurable effects and successes 25,8%
3. Trips and contacts with people 11,9%
4. Diversified character of the work 9,2%
5. Creative type of work 7,8%
6. Independent kind of work 6,7%
7. Keeping own fitness 6,4%
8. Acceptance of sport in society 1,7%
9. No answer 10,6%

Main disadvantages of coaching in the opinion of the coaches themselves:

1. Time comsuming and incommensurable character of work 40,8%
2. Bad working conditions - and lack of interest in them 19,4%
3. Low salaries 15,0%
4. Irregular and stressing way of living 13,1%
5. Stress and job related diseases 9,7%
6. Bad inter-human relations 5,8%
7. Unequal criteria of work assessment 2,8%
8. A long way to success 1,4%
9. No answer 11,1%

From what can be observed, such factors as working with people, shaping them, influencing them, improving their skills and abilities, the chance for self-fulfilment without waiting for the acceptance of others, appear as one of the most advantageous.

While analysing the disadvantages, they are rather connected with external conditions and factors, as well as, with the character of work itself.

Coaches do not fear long way to success, are not discouraged by bad inter-human relations, they believe in the force of persuasion and the strength of their own character. They believe that much can be done, provided there is enough willingsness - and that is from where the force of motivation derives, together with the identification with the profession which is unique - all of that is beining acknowledged in earlier publications devoted to the graduates of physical education academies.

5

Motivationsdiagnostik
Motivation Assessment

METHODOLOGICAL FOUNDATIONS OF A NEW TEST FOR ACHIEVEMENT MOTIVATION IN SPORT

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The importance of achievement motivation for successful participation in sport as well as the necessity to develop specific tools for its diagnosis and control in sport do not arouse controversy. Problems appear in choosing the ways for assessing and promoting achievement motivation. Objective reasons for these problems create the following achievement motivation features:

1) The curvilinear relationship between achievement motivation and performance, which promotes uncertainity about the optimal level of achievement motivation.

2) The different and specific forms of achievement motivation according to the activity to which it is directed and the situations which stimulate it.

3) The dependence of achievement motivation on many additional factors, which continually provoke changes in the level and direction of achievement motivation.

In an attempt to solve one of the problems in the assessment of achievement motivation, sport psychologists recently developed specific assessment instruments, adapted to sport activity and to sport situations. A survey of these instruments shows that they increase from day to day in number and improve in quality. Analysing 19 of them (see Appendix 1) their progressive amerlioration was impressive. By using these instruments some findings describing the specificity of achievement motivation in sport are attained, such as that:

1) Athletic achievement motivation is composed of various dimensions, (Gill, Dzewaltowski & Deeter, 1988). Thus individual differences in the motivation of athletes have to be defined also according to their dominant dimension.

2) Achievement motivation of athletes appears in some personality characteristics, such as aggression and conflict (Butt, 1979; Weiss, Bredmeier & Schewchuk, 1985), goal setting and aspiration (Gabler, 1983) and perception of own ability (Roberts, 1989). The relations among these characteristics define the specific structure of the achievement motivation of athletes (McAuley, Dunkan & Tammen, 1989).

3) The type of achievement orientation of the athletes explains why some athletes drop out while others persist (Ewing, 1981) or the level of the behavioral

intensity and effort (Roberts, 1989).

Despite their contributions, the specific sport motivational instruments have not overcome the main weakness in the assessment of motivation in general. Except for the attempt of Gabler (1975) to adapt the Heckhausen TAT to sport situations and to test the effect of these situations on the associative behavior of athletes, all other sport specific instruments measuring motivation are prepared as questionnaires based on self evaluation. Self evaluation, however, does not permit enough correct measurement of motivation. Motivation is a subjective factor of behavior, very sensitive itself to situational factors (Atkinson, 1974; Maeher, 1974; Rayner, 1969) and thus extremely changeable over time (Atkinson, 1981). Measurement of motivation, therefore, requires conscious control of its variations, the possibility to pinpoint its influence on behavior, as well as the effect of different factors on itself. Self evaluation cannot ensure this. Presenting relatively static description of achievement motivation, it cannot describe the "dynamic of action" which characterizes achievement motivation (Atkinson & Birch, 1974). That is why the different evaluating instruments often measure different motivational constructs (Fineman, 1977). Furthermore, self description concentrates mainly on the psychological content of achievement motivation - on the psychological characteristics that it incorporates, and/or their relationships. For assessing the athletes' achievement motivation, however, it is not enough to test its psychological content. Diagnosis and selection of athletes need first of all information about the effect of motivation on performance and behavior.

Such speculations stimulated the development of the new sport-specific assessment tool for measuring achievement motivation - the Wingate Motoric Motivation Test WMMT. It is a laboratory motor performance for measuring the effect of achievement motivation on motor performance and choice behavior during a competitive situation including induced success and failure. The development of this test was based on the following principles:

1) A specific characteristic ofrachievement motivation in sport is its orientation to motor activity. Athletes strive to achieve and to compete in motor activity and not in any other. Achievement motivation influences it and makes motor activity more vigorous, accurate, organized, stable, and persistent. Therefore the effect of achievement motivation may be measured in athletes objectivley by some characteristics of their motor activity. These characteristics, however, may be provoked not only by achievement motivation but also by many other factors (such as: task difficulty, ability, learning, personality, situation, additional motives). Special care is needed to isolate the effect of achievement motivation on motor activity and to control the effect of the other factors on it. Such isolation and control can be attained in laboratory setting only, by using a very simple motor activity not influenced by learning and measurable exactly and quantitatively.

A simple tapping activity was chosen for use in the test. It was controlled by instructions and feedback which created relevant situations. The effect of ability and personality was eliminated by measuring the motivational effect through derived variables which present relative changes in the motor activity influenced by the respective situations. Objects of measures were the speed of the motor performance (number of taps in a defined time period) and the choice behavior of the subjects demonstrated by the aspirations for the following performance (also in number of taps).

2) The second specific characteristic of achievement motivation in sport is its competitive orientation. It appears in so-called competitiveness - a form of reaction to competition. Even in early studies on general achievement motivation, competitiveness was pointed out as its important characteristic (Atkinson, 1974; Heckhausen, 1967; McClelland, Atkinson, Clark & Lowell, 1953; Murrey, 1938; Veroff, 1969). As a specific characteristic of the sport achievement motivation, competitiveness was discussed by Butt (1985), Gill et al. (1988), Fabian and Ross (1984), Martens (1975, 1976), Roberts (1982), Scanlan (1974, 1982), Vealey (1986), and others. Scanlan differentiates competitiveness as personal disposition (trait) and as competitive behavior. In both cases competitiveness appears in response to competition, which itself is a stressful situation provoked by social evaluation. As a personal disposition competitiveness is manifested in the willingness of the subject to participate in competition and in his/her persistent participation in it. Competitive behavior appears mainly as the effect of the competitive situation on the athlete's activity.

According to Gill et al. (1988) competitiveness may be manifested in winning orientation or in goal orientation. For athletes, winning orientation is a characteristic while goal orientation characterizes athletes and non athletes equally. Vealey (1986) also points that the main goal to which athletes strive in competition is to win.

The winning orientation is highest when the athlete competes face to face with an opponent with equal performance ability. This form of competition also restricts the other motives which may arise during competition (the motives of affiliation, cooperation, reward seeking, and others), and simultaneously provokes high ego involvement (Deci, Betley, Kahle, Abrams & Porac, 1981) with individually different effekts (Ryan & Lakie, 1965; Geron & Inbar, 1984).

The Wingate Motoric Motivation Test uses a purposely created laboratory competitive situation. It was consciously limited to the most simple one: direct (face to face) contest between two opponents with almost equal performance scores. The competition was repeated seven times. Competitiveness as personal disposition was tested by the agreement of the subjects to participate in the competition all seven times and by the stability in their motor performance and

choice behavior throughout the performance of the test. Competitive behavior was tested by the level and by the quality (positive or negative) of the effect of the competition on the motor performance and on the choice behavior of the athletes.

3) Achievement motivation in sport is manifested by the participants' reactions fo success and failure. The general theory of achievement motivation introduced the reactions to success and failure as a touchstone in the individual discrimination by achievement motivation (McClelland, 1951; Atkinson & Feather, 1966; Heckhausen, 1967). The constructs: Motive to approach success (MAS) and motive to avoid failure (MAF) were used in differentiating people with high and low achievement motivation. In subjects with high achievement motivation the motive approach success dominates (MAS > MAF) and in subjects with low achievement motivation the motive to avoid failure dominates (MAF > MAS). The effect of success and failure on the personal activity are different in these two groups of people (McClelland, 1951). The discriminating power of the reactions to success and failure urged the introduction of the respective situations in the schedule of the WMMT. The purpose was to control their effect on motor performance and if this effect discriminates between subjects. Situations of success and failure are created by feedback. Moulton (1965), testing the effect of success and failure on task choices, found that after success, people in general choose more difficult tasks and after failure - easier ones. In low achievement motivation people (MAF > MAS), however, most of the reactions are atypical. In contrast, according to the cognitive dissonance theory, subjects choose augmented performance after failure (Festinger, 1942; Aronson & Carlsmith, 1962). This seeming contradiction in statements may be explained by the fact that the effect of success and failure on personal activity depend on additional factors: past experience, repetition of the success or failure, their ratio, their level of intensity and importance, their stress. Feather (1966) found that the detrimental effect of failure appears in people with low self confidence because of the lack of success experience. Weiner (1980) pointed out that success can decrease performance when repeated many times. He as well as Rijkovskii (1979) and Baturin (1987) found that the detrimental effect of failure depends on the level of its intensity and its importance. Ryan and Lakie (1965) and Iso-Ahola (1976) showed that the effect of success and failure vary with the level of stressfulness of the situation. Martens and White (1975) found that the effect of winning and losing on motor performance depends on their ratio. The 50% ratio was found to ensure the highest positive effect.

The factors influencing the effect of success and failure were taken into account when introducing such situations in the WMMT. Each subject was exposed 3 times to the effect of success and 3 times to the effect of failure. The importance of these situations was regulated as equal and intermediate for all subjects. Their effect was tested on the subsequent motor performance and level of aspirations.

4) The effect of the achievement motivation has often been tested by the changes in

the subject's aspirations, interpreted as a manifestation of the choice behavior. The WMMT also introduced aspirations as dependent variables. According to the proposition of Levin, Dembo, Festinger & Sears (1944), aspiration was measured and presented by a relative score - the level of aspiration, derived from the relationship of the choice following performance and the still realized past performance. This relationship, according to Levin is very stable.

The use of the level of aspiration as a variable in the WMMT is based on findings about the influence of individual differences in achievement motivation on the level of aspirations. Atkinson and Litwin (1960) found that people with high achievement motivation (MAS) usually express intermediate aspirations (they choose tasks with intermediate difficulty) while low achievers (MAF) express very low or very high aspiration levels. This fact was also confirmed in athletes (Ostrow, 1976; Roberts, 1974). It stresses the assumption that stable aspirations are characteristic for people with high achievement motivation, and high variability in aspirations characterizes low achievers.

Blankenship (1987) found that subjects with high achievement motivation do not change level of aspirations after information about success or failure or after lack of information. Subjects with low achievement motivation decrease level of aspirations when information about outcome does not exist. These findings suggested that the effect of the competitive situations on the level of aspiration, as well as the variability of the aspirations could be used in differentiating between high and low achievers.

5) Another variable used in the WMMT is level of effort. Atkinson (1974) accepted that level of effort distinguishes people with high and low achievement motivation. Physiological studies on effort revealed fits relation with the level of neurological activation (Frankenhauser, 1983; Kahneman, 2973).

Efforts of athletes appear mainly in motor performance. That is why in defining the level of effort the WMMT uses motor variables. The maximal motor performance (the maximal speed) in tapping is undoubtedly affected by effort. However, the individual motor ability and the personal tendency to fast or slow movements also influence the maximal speed. To isolate these additional influences a new variable was derived, based on the relation of the maximal motor performance to the so called "personal tempo". Rimoldi (1951) advocated that people have unique and persistent personal tempi in producing movements. The personal tempo is measured by asking the subjects to produce regular, comfortable and uniform movement rate, without interruptions. Eysenck (1964) points out that subjects with high achievement motivation take few rest periods in tapping and tap more regularly. Thus level of effort in the WMMT was measured by the relation between the maximal and the personal tempo.

The principles presented above led the construction of the WMMT and the

determination of its variables. This was facilitated by the development of a mapping sentence according to the facet theory of Gutman (1982). It includes three facets (see Appendix 2) related to the forms of expression of achievement motivation, the situations which stimulate it and the concrete manifestations through which achievement motivation is measured. Using this mapping sentence two types of variables were defined for the test:

1. Basic or direct measures of:
   - the produced motor performance in the personal rate (PR)
     in the maximal rate (MR)
     in competition (CMR)
   - the aspiration for motor performance in maximal rate (A)
     in competition (CA)
   - the number of the subject's agreement to continue the performance (NW)

These types of variables (all 6) were used in shaping the second type of variables:

2. Derived variables which are 13 and are composed of relations between or mathematical calculations of the direct variables. They measure:
   - Level of Effort to maximal motor performance (Ef)
   - Level of Aspiration to maximal motor performance (LA)
   - Level of the Effect of Competition on the maximal motor performance (without information for outcomes)
   - Level of Aspiration in Competition (without information for outcomes) (CLA)
   - Mean Motor Performance in Competitive Situations (after outcome feedback) (xCMR)
   - Mean Level of Aspiration in Competitive Situations (after outcome feedback) (xCLA)
   - Variability of Motor Performance in Competitive Situations (VCMR)
   - Variability of the Level of Aspirations in Competitive Situations (VCLA)
   - Level of the Effect of Success on Motor Performance (ESMR)
   - Level of the Effect of Failure on Motor Performance (EFMR)
   - Level of the Effect of Success on Level of Aspiration (ESLA)
   - Level of the Effect of Failure on Level of Aspiration (EFLA)
   - Level of Persistence during Maximal Motor Performance (PP)

The construction of the test and some preliminary attempts to test its psychometric qualities are presented in the paper by Raviv, Geron and Low "The Wingate Motoric Motivation Test - WMMT. Structure and Psychometric Properties" in this volume.

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Appendix 1

Sport Specific Tools for Measure Achievement Motivation

	Authors and year of publication	Names of the Tests	Types
1.	Allmer,H. 1973	Sportspezifischen Motivationsfragebogen	Questionnaire
2.	Booth, E.G. 1958	Competitor - A/MMPI scale	MMPI scale, questionnaire
3.	Butt, D.S. 1979	Short scale for the measurement of sport motivation	Questionnaire
4.	Fabian, L., Ross, M. 1984	The Sports Competition Trait Inventory (SCTI)	Scales including statements for evaluation
5.	Fox, R., Rushall, B. 1980	An approach avoidance motivation scale for sports	Questionnaire
6.	Gabler, H. 1975	TAT Sportbildserien	Picture series
7.	Geron, E., Golborth, D., Areli, E., Winkelstein, N. 1986	Peer assessment of achievement motiva-tion of participants in sport	Lickert-type scale
8.	Gill, D.L., Deeter, T.L.E. 1989	The Sport Orientation Questionnaire (SOQ)	Questionnaire
9.	Heiby, E.M., Onorato, V.A., Sato, R.A. 1987	Exercise scale	Scale for evaluation
10.	McAuley, Ed., Dunkan, T., Tammen, V. 1989	Intrinsic Motivation Inventory in a competitive sport setting	A modification of the Ryan (1982) intrinsic motivation inventory = questionnaire after performance motor tasks in competitive setting
11.	Raugh, D., Wall, R. 1987	Measuring sports participation motivation	A revision of Youngblood & Swinn (1980) questionnaire
12.	Richardson, P.A., Jackson, A. Albury, K.W. 1984	Measurement of fear for failure	In using the self deprecation and insicurity scales
13.	Spence, J.T., Helmreich, R.L. 1983	A measure of achievement tendencies	For different groups incl. athletes
14.	Tutko, T.A., Lyon, L.P., Ogilvie, B.C. 1969	Athletic Motivation Inventory	13 scales

(cont.)

Appendix 1 (cont.)

	Authors and year of publication	Names of the Tests	Types
15.	Vallerand, R.J. 1983	Adaptation to sport of the Mayo Task Reaction Questionnaire (TRQ)	Questionnaire
16.	Vealey, R. 1986	Competitve orientation	Measure level of satisfaction in different situations in sport combine in a matrix with 2 types of results (good performance, good outcome)
17.	Weiss, M.R., Bredemeier, B.J., Schewchuk, R.M. 1985	Intrinsic/extrinsic motivation scale of the youth sport setting	Adaptation in sport of the Harter's (1981) instrument self-report scale
18.	Willis, J.D. 1982	Three scales to measure competition related motives in sport	Likert-type scales
19.	Youngblook, D. & Swinn, R.M. 1980	Motives for competition	Questionnaire using a Likert-scale

Appendix 2

Mapping Sentence for Achievement Motivation in Sport

A. Is expressed by
- a_1 Motor performance
- a_2 Aspirations
- a_3 Willingness to continue performance

B. In situations of
- b_1 Maximal motor performance
- b_2 Competition
- b_3 Success
- b_4 Failure

C. Is manifested in the
- c_1 Level of effort
- c_2 Level of aspiration
- c_3 Effect of the situations on motor performance
- c_4 Effect of the situations on level of aspiration
- c_5 Variability of the motor performance
- c_6 Variability of the level of aspiration
- c_7 Persistance in performance

Its range is arranged from very low to very high.

THE WINGATE MOTORIC MOTIVATION TEST - WMMT

STRUCTURE AND PSYCHOMETRIC PROPERTIES

SHULAMIT RAVIV, EMA GERON AND M. LOW, ISRAEL

This paper presents a new sport specific test measuring Achievement Motivation (AchM) for motor performance. It is a performance test, executed in laboratory setting using the Motor Performance Tapping Task. The test is computerized. The subjects are asked to perform the tapping several times in different situations, created by the instructions and manipulated feedback information. Each repetition of the performance lasts 14 seconds. The situations include: individual performance with personal rate and with maximal rate, seven performances in competition between two subjects, including three successive performances after being informed of success and three - of failure. The subject receives information on his/her results and the results of the partner. After every performance he/she is asked whether he/she would like to continue, and what his/her aspirations are for the next performance. The test is computerized. The programme includes instructions, feedback information (which is expressed numerically and graphically), and data analysis. The test uses two types of variables: (1) "Basic" variables - which are direct measures of the performance and aspiration indices; (2) "Derived" variables which are calculated from the basic variables. The first stage in evaluating the psychometric properties of the WMMT test was the estimation of the reliability and validity of the test. The results appear in the continuation of this research. The measurements concerning the psychometric properties of the test are currently continuing.

Subjects

Up to now, the WMMT was administered to the following groups of subjects in order to obtain reliability and validity of the test (N=412).

Group 1: This group consisted of 102 children, 11 to 13 years old (51 boys and 51 girls) from a centrally located town in Israel (Hadera).

Group 2: Consisted of 94 junior high-school boys, aged 14 to 16. This group comprised 32 "kibbutz" children, 37 from a town in the north of Israel (Safed), and 25 Arab village children.

Group 3: 40 high-school girls, aged 17 to 18, from a school in the center of Israel (Herzliya).

Group 4: 36 high-school girls, aged 16 to 17, from a city in central Israel (Bat Yam): 18 were athletes (volleyball players) and 18 non-athletes.

Group 5: 140 undergraduate students at a teachers college of physical education: 63 were male and 77 female, aged 22 to 26.

Reliability and Validity Data

Reliability

Test-Retest Reliability.

Stability of the test-retest reliability, for time periods varying from two weeks to six months, was examined in the various groups. Although analyses of test-retest reliability are appropriate for trait measurements, we decided to carry them out and use the results for various analyses.

a) In Group 1 (N=102) - the time period between the test and retest was one month. The Pearson correlation between the scores on the two testing periods (see Table 1) ranged between .42 and .87 ($p<.01$).

Table 1. Pearson correlations between test and retest in Group 1 (N=102).

Variable	r
PR	.42
MR	.72
A	.45
EF	.64
CMR	.75
ECMR	.77
XCMR	.87
VCMR	.45
ESCMR	.72
EFCMR	.56
LA	.45
CLA	.60
XCLA	.73
VCLA	.72
ESLA	.58
EFLA	.60

b) In Group 2 (N=94) - a period of two weeks to two months intervented between the two tests. The Pearson correlation was done on part of the variables (see Table 2) and ranged between .60 to .93 ($p<.01$).

Table 2. Pearson correlations between test and retest in Group 2 (N=94).

Variable	r
MR	.78
A	.78
CMR	.64
ECMR	.93
VCMR	.72
LA	.76
CLA	.76
VCLA	.60

c) In Group 5 (N=140) - the time period between the test and retest was from two months to six months. Spearman correlation was executed on the two testing periods (see Table 3) for the total group and for each gender separately (63 males and 77 females). Focusing on the "basic" variables (see Appendix 2) which represent the actual motor performance and aspirations, indicates a fairly high stability of the test for the time period (MR=.65; A=.56; CMR=.76; XCMR=.88; XCLA=.66).

A comparison of the intercorrelations among the variables in the test as well as in the retest (see Table 4) was carried out in order to test the stability of the WMMT. 272 correlations were calculated in both the test and retest, 250 of which (92%) appeared almost equally in the test and retest, while only 22 (8%), differed. 48 correlations were significant in both tests. This finding indicates a fairly high stability in time of the WMMT.

Reinforcement of the above results, and of the stability of the WMMT, can be found in the Factor Analysis of the test compared to that of the retest (see Table 5). A comparison of the factors extracted in both tests shows similarity in the structure of each factor, according to the variables included in it, and in most cases, in their loadings as well.

Internal Consistency of the WMMT

The internal consistency of the test was computed on the data obtained from Group 5 (N=140) by use of Kuder-Richardson Formula 20 as modified by Cronbach (1951). The Alpha coefficient obtained for the seven competitions according to Motor Performance, Aspirations and Willingness (see Table 6) is evidence of satisfactory internal consistency reliability of the WMMT.

Table 3. Spearman correlations between test and retest for the total population and for each gender group seperately.

Variable	Correlations		
	Total (N = 140)	Male (N = 63)	Female (N = 77)
PR	.37***	.12***	.54***
MR	.65***	.66***	.63***
A	.56***	.52***	.55***
EF	.40***	.13***	.62***
CMR	.76***	.77***	.72***
ECMR	-.01	-.00	-.01
$\bar{X}$CMR	.88***	.87***	.88***
VCMR	.35***	.41***	.27**
ESCMR	.16*	.16	.16
EFCMR	.04	-.01	-.02
LA	.22***	.19	.23**
CLA_0	.38***	.43***	.31**
$\bar{X}$CLA	.66***	.71***	.60***
VCLA	.41***	.15	.58***
ESLA	.28***	.36***	.27***
EFLA	.39***	.27***	.52***
PP	.31***	.40***	.42***

* $p < .05$
** $p < .01$
*** $p < .00$

Table 4. Spearman correlations of all the variables in the test and in the retest.

	MR		AS		EF		CHR		ECHR		$\bar{X}$CHR		VCHR		ESCHR	
	T	R	T	R	T	R	T	R	T	R	T	R	T	R	T	R
PR	.10	-.15	.10	-.13	-.97	-.96	.04	.05	.01	.10	.04	.05	.06	-.14	-.02	-.05
MR			.80	.89	.12	.35	.80	.78	-.14	-.22	.77	.77	.00	-.20	-.16	.16
AS					.08	.31	.65	.82	-.09	-.17	.61	.80	.01	.00	-.14	-.10
EF							.14	.22	-.05	-.06	.13	.21	-.08	.14	00	.05
CHR									.43	.22	.92	.92	.06	.06	-.30	-.02
ECHR											.32	.04	.07	.10	-.33	-.22
$\bar{X}$CHR													.13	.13	.00	.05
VCHR															.10	.14
ESCHR																
EFCHR																
LA																
CLA_0																
$\bar{X}$CLA																
VCLA																
ESLA																
EFLA																

	EFCHR		LA		CLA_0		$\bar{X}$CLA		VCLA		ESLA		EFLA		PP	
	T	R	T	R	T	R	T	R	T	R	T	R	T	R	T	R
PR	-.04	-.09	-.05	-.08	.04	.01	.00	.01	.02	.07	.01	.01	-.08	-.08	-.03	.00
MR	-.13	.23	-.17	.01	.10	.07	.10	.18	-.10	.26	.18	.11	.11	.12	.07	.04
AS	-.13	.17	-.38	.35	.12	.22	.22	.34	.06	.35	-.01	-.10	.00	.16	-.02	-.12
EF	.01	.13	.00	.07	.01	.06	.01	.01	-.05	.13	.04	.04	.04	.07	.07	-.07
CHR	-.20	-.05	-.06	.15	-.09	.09	.10	.11	-.03	.32	.08	-.11	.02	.11	-.05	-.10
ECHR	-.15	-.32	.05	.19	.20	.20	.03	-.03	.07	.02	-.11	-.30	-.15	-.15	-.11	.08
$\bar{X}$CHR	.12	.30	-.09	.15	.05	-.12	.10	.16	.02	.26	.08	-.06	.06	.06	-.02	.14
VCHR	.16	.01	-.01	.02	.01	.07	.19	.09	.32	.35	.03	-.11	.20	-.09	.04	-.06
ESCHR	.65	.53	.02	.04	-.02	.07	-.04	-.16	.07	-.01	-.03	-.02	.06	.18	.00	.12
EFCHR			.00	.00	.16	-.04	.08	.08	.07	.07	.02	.03	.17	.20	.05	-.05
LA					.38	.70	.24	.43	.24	.20	-.31	-.40	-.22	-.27	-.19	-.16
CLA_0							.51	.53	.34	.26	-.01	-.65	.59	-.45	.01	.12
$\bar{X}$CLA									.37	.33	-.16	-.14	.21	.24	.30	.33
VCLA											-.44	-.46	.09	.15	.07	.03
ESLA													.57	.46	.08	.00
EFLA															.22	.16

Table 5. Factor analysis of the test and retest.

Factor	Variables	Test	Retest
Factor 1: Motor Performance and Aspiration	$\bar{X}$CMR	.92	.94
	CMR	.91	.98
	AS	.85	.90
	MR	.53	.88
Factor 2: Level of Aspiration in Competition	CLA	-.92	.89
	ESLA	.88	-.78
	EFLA	.79	-.67
	LA	-.42	.77
Factor 3: Willingness for Effort	PR	-.99	-.99
	EF	.98	.96
Factor 4: Effect of Success & Failure on Motor Performance	ESCMR	.89	.81
	EFCMR	.88	.80
	ECMR	-.82	-.63
Factor 5: Variability in Motor Performance & Level of Aspiration in Competition	VCLA	.77	.81
	$\bar{X}$CLA	.64	.25
	VCMR	.63	.72
Factor 6: Level of Aspiration and Persistency	$\bar{X}$CLA	.81	.52
	PP	.73	.89

Table 6. Internal consistency between each of the 7 competitions in test and retest.

	Alfa Coefficient	
Variables	Test	Retest
Motor Performances	.97	.97
Aspirations	.78	.86
Willingness	.95	.96

Validity

In contrast to many existing behavioral assessment instruments, the validation of a Motivation test is a complex and difficult task. Achievement Motivation is not a general trait or ability. On the contrary, it is "something" related to a specific activity or goal, and is influenced by situational factors. As a result, there is no

unequivocal definition for achievement motivation, and therefore there are difficulties in testing its validity.

Despite this, we applied some analyses in order to validate the WMMT.

Concurrent Validity

Concurrent validity determines the effectiveness of a test in predicting responses to related constructs (Anastasi, 1990). Concurrent validity was tested by correlating the WMMT variables in each one of three groups (1, 3, 5) with a different reliable rating-questionnaire. A field test was applied (in group 4) for testing the validity for the WMMT's aspiration variable:

a) Low correlations were obtained in Group 1 (N=102) when using teacher-rating questionnaire. These results were inconclusive for validation purposes.

b) Correlating peer-rating questionnaires (Group 3: N=40) to the effect of success and failure variables of the WMMT, showed moderately high correlations (see Table 7).

Table 7. Correlations between 5 variables in WMMT and peer rating questionnaire (N=40).

Variables	Correlations
CMR	.88
CLA	.97
ECMR	.81
ESCMR	.87
EFCMR	.95

c) The correlations between the WMMT's "derived" variables (see Appendix 1) and the self-rating questionnaire (Group 5: N=140) were low (see Table 8) and ranged between -.31 and .24. These results do not contribute to the validation of the test.

d) The correlation between the level of aspiration (LA) tested in WMMT and the field test (Group 4: N=36) was significant (.45) in athletes (N=18) and not significant (-.04) in non-athletes (N=18). All the aspiration variables of the WMMT discriminated between athletes and non-athletes (see Table 9). These findings contribute to concurrent and construct validity of the test.

Table 8. Correlations of the "derived" variables of WMMT with self-rating questionnaire (N=140).

	EF	PP	CLA	VCMR	VCLA	ECMR	$\bar{X}$CMR	$\bar{X}$CLA	ESCMR	EFCMR	ESLA	EFLA
SL_1	.12	.08	-.10	.09	.03	.14	.19	.06	-.01	.05	.14	.20
SL_2		.02	.02	.09	.05	.03	.08	.14	.03	.05	.04	.18
SL_3			.02	.00	.02	.14	.20	.09	-.04	-.06	.07	.09
SL_4				-.01	-.03	.13	.09	-.02	.09	-.04	.05	-.00
SL_5					.07	.13	.08	-.01	-.02	-.14	-.03	.04
SL_6						.09	-.16	-.12	.07	-.04	.10	.15
SL_7							-.06	.07	-.19	-.31	-.05	.01
SL_8								.17	.20	-.24	.02	.11
SL_9									-.04	-.02	.04	.06
SL_{10}										-.03	.02	.11
SL_{11}											.19	.17
SL_{12}												.09

Table 9. The differences in aspiration variables between athletes and non-athletes in the WMMT (N=36).

Variables	Groups	Athletes (N = 18)	Non-athletes (N = 18)	t-score
LA	$\bar{X}$	114.94	130.11	-3.20**
	SD	13.22	14.51	
CLA	$\bar{X}$	119.68	105.95	2.62*
	SD	6.35	8.40	
VCLA	$\bar{X}$	2.42	3.15	3.51**
	SD	1.06	1.43	
ESLA	$\bar{X}$	104.09	112.79	-2.71*
	SD	6.51	11.99	
EFLA	$\bar{X}$	101.40	117.15	-2.72*
	SD	6.62	11.22	

* $p < .05$
** $p < .0$

Construct Validity

Construct validity was tested by performing various statistical analyses using various internal relationships of the variables (Group 5: N=140).

1. Factor analyses executed on the results of the test as well as on the retest revealed a six-factor structure which is almost compatible with the hypothesized dimensions of the achievement motivation: effort, motor-performance, aspiration, effect of success and failure, variability in motor-performance and level of aspiration (see Table 5).

2. High correlations which were found between variables having a logical relationship, contributed to convergent validity of the test (see Table 10).

3. The absence of correlation between the variables of WMMT and anxiety (TAI) is theoretically logical and in line with most achievement literature (Gill, Ozewaltowski & Deeter, 1988). This result provides divergent evidence for the validity of WMMT.

Table 10. Correlations between variables which are related logically (in the test and in the retest).

Variables	Correlation (N = 140)	
	Test	Retest
MR - A	.80	.89
MR - CMR	.80	.78
A - CMR	.65	.82
A - $\bar{X}$CMR	.61	.80
CMR - $\bar{X}$CMR	.92	.92
MR - $\bar{X}$CMR	.77	.77

4. Discriminant analysis was used in order to find the construct validity and the predictive validity of the test, and to establish an easy applicable tool for future use in discriminating among high achievers (EFCMR>100) and low achievers (EFCMR>100). The subjects of Group 5 (N=140) were divided into two groups according to the EFCMR variable, measuring the effect of failure on the motor performance: the subjects who scored above 100 were defined as "High achievers", and are characterized by the increasing of motor performance after failure (see Table 11) and were given the value 1. The subjects who scored below 100 in EFCMR were defined as "Low achievers" and were given the value 0. This cutting point is the first stage in the discrimination. In the future, after establishing the validity of the test, a finer division will be considered.

The method used: A stepwise multiple regression analysis was done on the test results. Beta coefficients from that model were applied to the data of the retest. Each result was rounded off into 0 or 1 and then compared with the actual degree of AchM for that group.

During the process of the stepwise analysis, the functions with high Multiple R (> .8) were tested for their prediction accuracy.

Two models were selected:

A) AchM = .001 x PR -.006 x -.069 x CMR + .081 x XCMR

B) AchM = -.072 x CMR + .078 x XCMR

The results are shown in Table 12.

Table 11. Mann-Whitney U-test of the differences in motor-performance of subjects scored above and below 100 who failed in the first three competitions.

	Mean Ranks				P	
	Test		Retest		Test	Retest
No. of Competition	EPCMR < 100	EPCMR > 100	EPCMR < 100	EPCMR > 100		
CMR 1	35.16	34.89	27.46	33.71	.95	.16
CMR 2	29.62	38.90	24.77	37.63	.05	.00
CMR 3	26.62	41.20	23.36	39.69	.00	.00
CMR 4	29.19	39.24	24.97	37.33	.04	.00
CMR 5	26.47	41.19	24.79	37.60	.00	.00
CMR 6	27.69	40.30	24.37	38.21	.00	.00
CMR 7	27.74	40.26	24.03	38.71	.01	.00

Even though the multiple R is slightly larger for the first model, the prediction accuracy is better for the second model, and it is easier to apply. The difference in prediction accuracy in the retest the subjects knew in advance what was expected from them, and therefore, most of the variables were influenced.

Although there is a high correlation between the two variables, CMR and XCMR, each one has its unique contribution to explain parts of the variance in the model, and neither of them can be excluded from it.

Table 12. Discriminant analysis results of the motor performance variables.

		Prediction Accuracy*	
Model	Multiple R	Test	Retest
A) PR, MR, CMR, $\bar{X}$CMR	.874	90.71%	72.72%
B) CMR, $\bar{X}$CMR	.872	90.71%	79.34%

Note: *prediction accuracy is defined as the proportion of the decisions that were correct (Pct)

$$Pct = \frac{\text{Correct Predictions}}{N}$$

The discrimination between the two groups of subjects has high discriminating power as shown in Table 13, and suggests high construct validity. The accuracy of prediction is high, and provides evidence for the predictive validity of the test. It suggests that the variables CMR and XCMR may be used as a tool for avaluating AchM. EFCMR variable, measures the Effect of Failure in Competition, on the Maximal Rate in motor performance.

Table 13. Classification results - Model B correct and incorrect classification.

		Test			Retest		
	AchM	Actual N	Predicted Membership Group		Actual N	Predicted Membership Group	
			0	1		0	1
EFCMR<100	0	63 (45%)	56 (88.9%)	7 (11.1%)	71 (58.7%)	48 (67.6%)	23 (32.4%)
EFCMR>100	1	77 (55%)	6 (7.8%)	71 (92.2%)	50 (41.3%)	2 (4%)	48 (96%)
Total		140	62	78	121	50	71
Percent of correctly classified cases			90.71			79.34	

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Appendix 1.

1) PR - Personal Rate
2) MR - Maximal Rate
3) A - Aspiration toward the next performance
4) CMR - Maximal Movement Rate in Competition (1st trial)
5) cmr - Information about the MR after each trial
6) CA - Aspiration before the 1st trial in Competition
7) W - Willingness to continue the performance

Derived Variables

1) EF - Willingness to Effort: $\frac{MR}{PR}$ (1 .....20)

2) LA - Level of Aspiration: $\frac{A \times 100}{MR}$ (80 .....180)

3) ECMR - Competitiveness (effect of competition on MR) $\frac{CMR \times 100}{MR}$ (80...180)

4) $\bar{X}$CMR - Mean MR in Competion: $\frac{CMR}{7}$ (80 .....100)

5) CLA_0 - Level of Aspiration before 1st Competition: $\frac{CA \times 100}{CMR_1}$ (80 ...180)

6) $\bar{X}$CLA - Mean LA in Competition: $\frac{CLA}{8}$ (80. . .180)

7) VCMR - Stability (Variability) of MR in Competition: $\frac{SdCMR \times 100}{\bar{X}CMR}$ (1... 20)

8) VCLA - Stability (Variability) of LA in Competition: $\frac{SdCLA \times 100}{\bar{X}CLA}$ (1... 20)

9) ESCMR - Effect of success on MP: $\frac{\bar{X}SCMR \times 100}{CMR_1}$ (80 ... 180)

10) EFCMR - Effect of Failure on MP: $\frac{\bar{X}FCMR \times 100}{CMR_1}$ (80 ... 180)

11 ESCLA - Effect of success on LA: $\frac{\bar{X}SCLA \times 100}{CLA_0}$ (80 ... 180)

12) EFCLA - Effect of failure on LA: $\frac{\bar{X}FCLA \times 100}{CLA_0}$ (80 ... 180)

13) PP - Persistence in MP: nW (0 ... 8)

DAS MOTIV-GITTER - EIN DIAGNOSTISCHES INSTRUMENT FÜR MOTIVKLASSEN

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Einführung

In der Motivationstheorie sind eine Reihe von Ansätzen bzw. Theorievorschlägen bekannt. Die meistverbreiteten Theorien davon sind die von Atkinson und McClelland in den USA und die von Heckhausen im deutschsprachigen Raum.

Den nachfolgenden Ausführungen liegt im wesentlichen die Theorie von Heckhausen (1963, 1972, 1977, 1980) zugrunde. Nach dieser Theorie werden im Zusammenwirken des "Dispositionellen" mit dem "Situativen" die Motive angeregt. Der Prozeß der Motivanregung wird Motivierung genannt. Dieser Prozeß ist aus einer Reihe von Erfahrungsdaten, Daten der augenblicklichen Lage und von Erwartungen bestimmt, die die Person "voreinstellen" und auf die Handlungsabwicklung Einfluß nehmen.

Geht man von einer Motivcharakteristik als "hochverallgemeinerter Wertungsdisposition für einzelne Grundsituationen" (Heckhausen, 1974, S. 142) aus, dann ist man gezwungen, nicht unzählige Person-Umwelt-Beziehungen, sondern "äquivalente Inhaltsklassen" zu definieren. Allerdings sind sich die Wissenschaftler nicht einig, welche und wieviele Wertungsdispositionen notwendig sind, um Verhalten hinreichend zu diagnostizieren bzw. vorherzusagen. So liegen zahlreiche Klassifikationsversuche bzw. Konzepte vor, die bei Gabler (1986, S. 66 ff.) der Thematik entsprechend zusammengefaßt sind. Ein solcher Klassifikationsversuch bezieht sich auf die Frage der Motivgenese.

Arten menschlicher Grundsituationen

Erdmann (1979, S. 12) hat unter Beibehaltung des Entwicklungsaspekts anderer Konzepte versucht,

> Motivklassen mit ihren theoretischen Implikationen und empirischen Befunden, unter dem Gesichtspunkt der Motivgenese, in ein Schema zu bringen, das gerafft und überschaubar mögliche Verläufe und Zusammenhänge darstellt.

Schema der Motivgenese

Während Heckhausen (1974, 1977, 1980) vier Motive beschreibt - Aggression, Macht, Hilfe und Leistung -, richtet Erdmann (1979, 1983) seine Aufmerksamkeit auf fünf Arten menschlicher Grundsituationen. Danach sind folgende Motive zu unterscheiden: das Anschlußmotiv (AM), das personalisierte Einflußstreben (pE), das Leistungsmotiv (LM) mit seinen Tendenzen "Hoffnung auf Erfolg" (HE) und "Furcht vor Mißerfolg" (FM) und das "sozialisierte Einflußstreben" (sE).

Sehr früh stellte sich jedoch die Frage nach dem einheitlichen methodisch-empirischen Herangehen, das die Messung der obengenannten Motivklassen erlauben würde. Die Antwort auf diese Frage gab Kleine (1982), der auf der Basis der Theorie der Motivgenese (vgl. Erdmann, 1979) ein semiprojektives Verfahren entwickelt hat.

Das Motiv-Gitter

Die Grundprinzipien der Konstruktion des Motiv-Gitters (M-G) gehen auf die Arbeiten von Schmalt (1973, 1974, 1976) zurück.

Mit dem M-G, das insgesamt den statistischen Anforderungen genügt, wurden zahlreiche Untersuchungen im deutschsprachigem Raum durchgeführt. Es stellte sich jedoch die Frage, ob dieses Meßverfahren auch bei anderen Kulturen für diagnostische Zwecke benutzt werden kann. Diese Frage griff Tsorbatzoudis (1987, 1990a) auf.

Methodisches Vorgehen bei der Übertragung des Motiv-Gitters in die griechische Sprache:

Das methodische Vorgehen beinhaltete neun Schritte (vgl. Tsorbatzoudis, 1990a, S. 139). Unter anderem wurde die "backtranslation technique" angewendet. Nach drei empirischen Versuchen und entsprechenden Sprach- und Satzbaukorrekturen konnten faktoriell fünf Motivklassen voneinander getrennt werden.

Untersuchungsergebnisse

Eine Reihe von Gründen führten zur Abkürzung des Bilder- und Itemsatzes (vgl. Tsorbatzoudis, 1990a, S. 181), wobei statistische Kriterien die wichtigste Rolle spielten.

Tabelle 1 enthält die Ergebnisse der Faktorenanalyse des hinsichtlich Bilder und Items abgekürzten Verfahrens. Darin sind Faktorladungen unter .20 nicht

enthalten.

Tabelle 1. Varimax-rotierte-Hauptsachen-Faktorenlösung; 5 Bilder; N=477 (aus Tsorbatzoudis, 1990a, S. 182).

Var.	FAK I	II	III	IV	V	h^2
AM1	.42 (;)		.58			.55
AM2	.42 (;)		.63			.61
AM3	.23 (;)		.40		.21 (;)	.27
pE1	-.22 (;)		-.25 (;)	.49	-.28 (;)	.44
pE2				.62		.40
pE4				.65		.44
FM1		.77				.60
FM2		.81				.66
FM4		.51				.32
HE1	.67		.29 (;)			.55
HE2	.68					.50
HE3	.66					.48
sE1					.54	.30
sE2			.30 (;)		.47	.39
sE4	.26 (;)				.34	.23

Die dargestellte Faktormatrix weist weitgehend eine Einfachstruktur auf, da die Faktorladungen der 15 Variablen immer nur auf einen Faktor hoch und auf allen anderen Faktoren niedrig sind. Die fünf Faktoren zusammen erklären etwa 64% der Gesamtvarianz.

Validierungsversuche

Obwohl mehrere Studien hinreichende Konstruktvalidität des Gitters erkennen lassen (vgl. Kleine, 1982; Erdmann, 1987), sollte die Frage erneut gestellt werden. Es sollte geprüft werden, ob erwartungskonforme Beziehungen zu entsprechenden anderen Verfahren existieren. Deshalb wurde angenommen, daß zwischen Motivklassen, Selbstkonzept- und anderen abstrakteren Persönlichkeitsvariablen Beziehungen existieren.

Zur Prüfung dieser Hypothese wurde ein von Tsorbatzoudis (1990a) erstellter Selbstkonzeptfragebogen (SKZ) und das Freiburger-Persönlichkeits-Inventar (FPI-A) herangezogen. Es wurde das gleiche methodische Konzept wie bei der Übertragung des M-Gs zugrundegelegt (vgl. Tsorbatzoudis, 1990b). Vor dem Vergleich wurden die Daten der Fragebögen durch Faktorisierung homogenisiert.

In der Hauptuntersuchung (N=477) zeigten sich beträchtliche Zusammenhänge

zwischen den mittels Fragebögen erfaßten Persönlichkeitsmerkmalen und den Motivvariablen des Motiv-Gitters.

Insgesamt sprechen die Befunde dafür, daß das Motiv-Gitter motivationsspezifische Verhaltensmuster der befragten Personen anspricht, die von Selbstkonzepts- und Persönlichkeitsmerkmalen abhängig sind. Dies läßt vermuten, daß die mit dem Gitter erfaßten Motivdimensionen ebenso wie die FPI-Dimensionen relativ stabile Merkmale darstellen, obwohl die Korrelationen zwischen FPI und Motiv-Gitter sehr niedrig sind.

Es drängte - angeregt von der klassischen Testtheorie - sich die Frage auf, ob es sich um ein einmaliges Ergebnis handelt, ob also das Verfahren hinreichende Reliabilität besitzt.

Untersuchung zur Replikation der Ergebnisse des Motiv-Gitters

Es wurde ein Versuch organisiert, der als Replikationsversuch der Ergebnisse des M-Gs gedacht war. D.h. es sollte zwei Schuljahre später geprüft werden, ob die Ergebnisse der Hauptuntersuchung den Ergebnissen der neuen Untersuchung entsprechen.

Untersuchungsverfahren und -personen

Es wurde die modifizierte Version des M-Gs nach den Vorschlägen von Tsorbatzoudis (1990a) benutzt.

Die Untersuchungspopulation bildeten drei Klassen eines Gymnasiums (N=72) und zwei eines Lyzeums (N=57). Die Anzahl der Männer lag etwas niedriger als die Anzahl der Frauen (M=55; F=74). Das Alter lag bei 15 Jahren (X=15,2).

Untersuchungsdurchführung und Datenauswertung

Die Untersuchung wurde im April 1990 in Absprache und Anwesenheit des jeweils unterrichtenden Lehrers durchgeführt. Die Durchführung lief nach einem stereotypen Muster, das bei Tsorbatzoudis (1990 a, S. 162) festgehalten ist. Die Zeit, die die Schüler gebraucht haben, um das M-G auszufüllen, betrug etwa 30 Minuten.

Die Datenauswertung erfolgte mit dem Statistik-Programm-System (SPSS) (vgl. Brosius, 1988). Bei der vorliegenden Untersuchung wurde die Prozedur der Faktorenanalyse angewandt. Das Ziel ihrer Anwendung bestand darin zu prüfen, ob sich die Faktorenstruktur der Hauptuntersuchung bestätigen läßt.

Parallel dazu wurde das statistische Programm FAST angewendet. Mit diesem