

Co-funded by the
Erasmus+ Programme
of the European Union



Using running involvement levels to Segment Greek runners according to their motives and life satisfaction

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Run for Health project



Co-funded by the
Erasmus+ Programme
of the European Union



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Purpose of the study

The present study aimed:

- a) to cluster urban running event participants, according to their running involvement levels
- b) to test if the groups with different involvement levels can be differentiated according to their motives for participating in running events and life satisfaction



Contribution



...reveal clear runners' segments in a large sample and examine behavioral differentiations among groups in urban sport events



Introduction - Context



- Participation in running sport events has become the last ten years in Greece and globally one of the most popular leisure activities (Scheerder, et al., 2015).
- Running Motivation: remains an interesting topic with applied and theoretical interest.
- Research has revealed several motives that drive an individual to participate in running events; examples include health, social and psychological related motives (Aicher, et al., 2015).
- Sport Involvement: One of the variables that has been shown to be promising in segmenting runners is their involvement levels (Alexandris, 2016).





Theoretical background



- ▶ **Motivation:** refer to the forces that initiate, direct, and sustain behavior (Iso-Ahola, 1999)

- ▶ **Outcomes of Motivation**
 - Cognitive (e.g., look for information)
 - Affective (e.g., increased enjoyment, satisfaction)
 - Behavioral (e.g., loyalty)





Self Determination Theory



- ▶ Self-Determination (Deci and Ryan, 1985; Ryan & Deci, 2000,
<http://www.selfdeterminationtheory.org/theory/>)

There are two types of motivation:

- ▶ intrinsic motivation
- ▶ extrinsic motivation

And

- ▶ The stage of amotivation.
- ▶ These motivation types run along a continuum from intrinsic to extrinsic motivation, and then to amotivation (Deci & Ryan, 1985). That is, the level of self-determination and motivation decreases as an individual moves from intrinsic motivation to amotivation





Types of Motivation and The Self-Determination Theory



► Funk, Alexandris & McDonald, 2016



High Self Determination

Low Self Determination





Outcomes of Motivation



Different types of motivation → different outcomes

- *High intrinsic motivation*
 - More likely to have positive outcomes (e.g., Loyalty)
- *High Extrinsic Motivation*
 - Can have both positive and negative outcomes
- *Amotivated individuals*
 - Are expected to have negative outcomes (e.g. stop engaging in the behavior)





Sport Involvement



- **Sport involvement represents an attitudinal concept**
Reflects the degree of personal relevance a sport object has for a consumer and can range on a continuum from low to high
- **Two characteristics:**
 - attitudinal outcome in decision-making
 - influences the amount of cognitive effort to evaluate external inputs





Sport Involvement Model



(Kyle, et al., 2004)

- Centrality
- Attractiveness / Excitement
- Self-Expression





Research Method



- Quantitative data were collected both online and post-race by making use of questionnaires.
- The study took place from April 2019 and before the covid-19 period.

Sample

- The sample size was 5,122 runners from three different running sport events in Greece (valid questionnaires were =4,461— Athens Marathon-The authentic=4,211, Run Together =109 and c) Τρέχω για τη μνήμη =81).
- The majority were male (55,7%), with a university degree (38,7%) , an average age of 40,2 years old, not affiliated in a running club (55,2%) and household status showed that 44% were couples with children.





Research Method



Research Instrument

...was a combination of:

- a) Running Involvement scale - adopted from Alexandris (2016) with three factors (centrality, attractive, self-expression),
- b) Run Motivations – adopted from Aicher and colleagues (2015) with four factors (get fit/health, competitive, socialization, achievement) and
- c) a Life satisfaction scale which was measured by one factor with three questions (1. In most ways my life is close to ideal, 2. The conditions of my life are excellent, 3. I am satisfied with my life).

All questions were measured in 7-point Likert scales with anchor points 1=Strongly Disagree to 7= Strongly Agree.

Data analysis

- Cluster analysis was used to categorize participants into distinct groups, according to their running involvement level.
- MANOVA was used in order to explore the differences among groups in terms of the dependent variables (get fit/health, competitive, socialization, achievement and life satisfaction).



Cluster groups with K-means for each Sport Involvement factor

Group_Excitement

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1,00	178	4,3	5,1	5,1
	2,00	1055	25,4	30,3	35,5
	3,00	2244	53,9	64,5	100,0
	Total	3477	83,6	100,0	
Missing	System	684	16,4		
Total		4161	100,0		

Group_Centrality

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1,00	409	9,8	11,8	11,8
	2,00	1271	30,5	36,7	48,5
	3,00	1782	42,8	51,5	100,0
	Total	3462	83,2	100,0	
Missing	System	699	16,8		
Total		4161	100,0		

Group_Selfexpression

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1,00	289	6,9	8,4	8,4
	2,00	1249	30,0	36,2	44,5
	3,00	1916	46,0	55,5	100,0
	Total	3454	83,0	100,0	
Missing	System	707	17,0		
Total		4161	100,0		



Cross Tabs: Group Excitement - Gender



Segments	1. Low	2. Moderate	3. High
Males	69 47,6%	<u>442</u> 51,6%	<u>1135</u> 58,2%
Females	<u>76</u> 52,4%	414 48,3%	812 41,6%
Total	145	857	1950

Chi-Square Test=15,173 (df=4), p<.01

Cross Tabs: Group Centrality - Gender



Segments	1. Low	2. Moderate	3. High
Males	<u>184</u> 53,6%	<u>578</u> 55,2%	<u>883</u> 56,7%
Females	159 46,4%	468 44,7%	671 43,1%
Total	343	1048	1556

Chi-Square Test=2,125 (df=4), p>.05

Cross Tabs: Group Self Expression - Gender



Segments	1. Low	2. Moderate	3. High
Males	<u>119</u> 50,2%	<u>576</u> 55,5%	<u>948</u> 56,8%
Females	118 49,8%	459 44,5%	721 43,3%
Total	237	1035	1670

Chi-Square Test=6,517 (df=4), p>.05

Cross Tab: Group Excitement-Educational status

Segments	1. Low	2. Moderate	3. High
Primary school	2 1,4%	9 1%	14 0,7%
Intermediate secondary school	6 4,1%	11 1,3%	38 1,9%
Higher secondary school	6 4,1%	68 7,9%	177 9,1%
Vocational secondary school	57 39,3%	303 35,3%	670 34,3%
University	53 36,6%	341 39,7%	748 38,3%
Other	2 1,4%	21 2,4%	51 2,6%
Not (yet) completed any education	3 2,1%	1 0,1%	20 1%
Total	129	764	1718

Chi-Square Test=16,952 (df=18), p>.05

Cross Tab: Group Centrality-Educational status

Segments	1. Low	2. Moderate	3. High
Primary school	5 1,5%	8 0,8%	12 0,8%
Intermediate secondary school	6 1,7%	11 1%	37 2,4%
Higher secondary school	16 4,7%	75 7,1%	160 10,3%
Vocational secondary school	127 36,9%	390 37,1%	511 32,8%
University	141 41%	419 <hr/> 39,9%	583 <hr/> 37,4%
Other	5 1,5%	21 2%	48 3,1%
Not (yet) completed any education	3 0,9%	17 1,6%	15 1%
Total	303	941	1366

Chi-Square Test=38,674 (df=18), p<.01

Cross Tab: Group Self Expression -Educational status

Segments	1. Low	2. Moderate	3. High
Primary school	3 1,3%	7 0,7%	15 0,9%
Intermediate secondary school	6 2,5%	18 1,7%	31 1,9%
Higher secondary school	10 4,2%	78 7,5%	162 9,7%
Vocational secondary school	77 32,4%	395 38%	555 33,2%
University	102 42,9%	385 37,1%	655 <u>39,2%</u>
Other	6 2,5%	24 2,3%	44 2,6%
Not (yet) completed any education	5 2,1%	13 1,3%	17 1%
Total	209	924	1479

Chi-Square Test=20,334 (df=18), p>.05

Cross Tab: Group Excitement-Running context

Segments	1. Low	2. Moderate	3. High
Member of an athletic club	13 7,3%	474,5%	341 15,2%
Not affiliated, I run in an informal running group with a trainer	5 2,8%	44 4,2%	137 6,1%
Not affiliated, I run in an informal running group without a trainer	10 5,6%	76 7,2%	155 6,9%
Not affiliated, I run alone	110 <hr/> 61,8%	734 <hr/> 69,9%	1456 <hr/> 65%
Other	24 13,5%	97 9,2%	136 6,1%
Don't know/ no answer	16 9%	52 5%	14 0,6%
Total	178	1050	2239

Chi-Square Test=195,754 (df=10), p<.001

Cross Tab: Group Centrality-Running context

Segments	1. Low	2. Moderate	3. High
Member of an athletic club	12 3%	89 7%	299 16,8%
Not affiliated, I run in an informal running group with a trainer	12 3%	59 4,7%	113 6,3%
Not affiliated, I run in an informal running group without a trainer	23 5,7%	87 6,9%	128 7,2%
Not affiliated, I run alone	286 70,4%	907 71,6%	1102 61,9%
Other	43 10,6%	103 8,1%	110 6,2%
Don't know/ no answer	30 7,4%	22 1,7%	28 1,6%
Total	406	1267	1780

Chi-Square Test=173,319 (df=10), p<.001

Cross Tab: Group Self Expression -Running context

Segments	1. Low	2. Moderate	3. High
Member of an athletic club	17 5,9%	104 8,3%	276 14,4%
Not affiliated, I run in an informal running group with a trainer	18 6,3%	67 5,4%	95 5%
Not affiliated, I run in an informal running group without a trainer	20 7%	73 5,9%	144 7,5%
Not affiliated, I run alone	170 59,4%	864 69,3%	1262 66%
Other	36 12,6%	95 7,6%	125 6,5%
Don't know/ no answer	25 8,7%	43 3,5%	11 0,6%
Total	286	1246	1913

Chi-Square Test=136,474 (df=10), p<.001



MANOVA- Group Excitement



- The MANOVA analysis showed statistically significant differences among groups for all the dependent variables (Wilks' Lambda=.96, F=9,13, p<.001) with a medium effect size (Partial Eta Squared=.015).

Descriptive Statistics

	Group_Excitement	Mean	Std. Deviation	N
sat_life	1,00	4,8502	1,41110	148
	2,00	5,2271	1,10371	849
	3,00	5,3627	1,08129	1911
	Total	5,2971	1,11296	2908
Fit_level	1,00	2,4966	1,20208	148
	2,00	2,7901	1,17354	849
	3,00	2,7358	1,25527	1911
	Total	2,7395	1,23039	2908
Social	1,00	2,5484	1,01188	148
	2,00	2,6188	1,03014	849
	3,00	2,7873	1,12250	1911
	Total	2,7259	1,09391	2908
Competive	1,00	2,5743	,99380	148
	2,00	2,8286	,94377	849
	3,00	3,0024	,97970	1911
	Total	2,9298	,97636	2908
Achievement	1,00	2,4341	1,00778	148
	2,00	2,6109	1,00573	849
	3,00	2,6804	,98225	1911
	Total	2,6476	,99185	2908



MANOVA-Post Hoc Test

Dependent Variable	(I) Group_Excitement	(J) Group_Excitement	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
						Lower Bound	Upper Bound
sat_life	1,00	2,00	-,3769*	,09859	,000	-,6131	-,1407
		3,00	-,5125*	,09444	,000	-,7387	-,2863
	2,00	1,00	,3769*	,09859	,000	,1407	,6131
		3,00	-,1356*	,04565	,009	-,2449	-,0262
	3,00	1,00	,5125*	,09444	,000	,2863	,7387
		2,00	,1356*	,04565	,009	,0262	,2449
Fit_level	1,00	2,00	-,2935*	,10950	,022	-,5558	-,0312
		3,00	-,2392	,10489	,068	-,4904	,0120
	2,00	1,00	,2935*	,10950	,022	,0312	,5558
		3,00	,0543	,05070	,852	-,0671	,1758
	3,00	1,00	,2392	,10489	,068	-,0120	,4904
		2,00	-,0543	,05070	,852	-,1758	,0671
Social	1,00	2,00	-,0703	,09717	1,000	-,3031	,1624
		3,00	-,2389*	,09308	,031	-,4618	-,0159
	2,00	1,00	,0703	,09717	1,000	-,1624	,3031
		3,00	-,1685*	,04499	,001	-,2763	-,0607
	3,00	1,00	,2389*	,09308	,031	,0159	,4618
		2,00	,1685*	,04499	,001	,0607	,2763
Competitive	1,00	2,00	-,2543*	,08641	,010	-,4613	-,0473
		3,00	-,4280*	,08277	,000	-,6263	-,2298
	2,00	1,00	,2543*	,08641	,010	,0473	,4613
		3,00	-,1737*	,04001	,000	-,2696	-,0779
	3,00	1,00	,4280*	,08277	,000	,2298	,6263
		2,00	,1737*	,04001	,000	,0779	,2696
Achievement	1,00	2,00	-,1768	,08823	,136	-,3881	,0345
		3,00	-,2463*	,08451	,011	-,4488	-,0439
	2,00	1,00	,1768	,08823	,136	-,0345	,3881
		3,00	-,0695	,04085	,267	-,1674	,0283
	3,00	1,00	,2463*	,08451	,011	,0439	,4488
		2,00	,0695	,04085	,267	-,0283	,1674



MANOVA- Group Centrality



- The MANOVA analysis showed statistically significant differences among groups for all the dependent variables (Wilks' Lambda=.96, $F=9,93$, $p<.001$) with a medium effect size (Partial Eta Squared=.017).

	Group_Centrality	Mean	Std. Deviation	N
sat_life	1,00	5,2474	1,23050	349
	2,00	5,2788	1,10083	1033
	3,00	5,3201	1,09238	1523
	Total	5,2967	1,11274	2905
Fit_level	1,00	2,5759	1,18029	349
	2,00	2,7649	1,19175	1033
	3,00	2,7599	1,26589	1523
	Total	2,7396	1,23093	2905
Social	1,00	2,4971	1,00127	349
	2,00	2,6436	1,05132	1033
	3,00	2,8345	1,13059	1523
	Total	2,7261	1,09441	2905
Competive	1,00	2,6332	,95073	349
	2,00	2,8446	,90905	1033
	3,00	3,0571	1,00493	1523
	Total	2,9306	,97618	2905
Achievement	1,00	2,3954	,98086	349
	2,00	2,5870	,94457	1033
	3,00	2,7476	1,01237	1523
	Total	2,6482	,99182	2905



MANOVA-Post Hoc Test

Bonferroni

Dependent Variable	(I) Group_Centrality	(J) Group_Centrality	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
						Lower Bound	Upper Bound
sat_life	1,00	2,00	-,0314	,06890	1,000	-,1965	,1336
		3,00	-,0727	,06604	,813	-,2309	,0855
	2,00	1,00	,0314	,06890	1,000	-,1336	,1965
		3,00	-,0413	,04485	1,000	-,1487	,0662
	3,00	1,00	,0727	,06604	,813	-,0855	,2309
		2,00	,0413	,04485	1,000	-,0662	,1487
Fit_level	1,00	2,00	-,1890*	,07615	,039	-,3714	-,0066
		3,00	-,1840*	,07299	,035	-,3588	-,0091
	2,00	1,00	,1890*	,07615	,039	,0066	,3714
		3,00	,0050	,04957	1,000	-,1137	,1238
	3,00	1,00	,1840*	,07299	,035	,0091	,3588
		2,00	-,0050	,04957	1,000	-,1238	,1137
Social	1,00	2,00	-,1465	,06736	,089	-,3078	,0149
		3,00	-,3374*	,06457	,000	-,4921	-,1827
	2,00	1,00	,1465	,06736	,089	-,0149	,3078
		3,00	-,1909*	,04385	,000	-,2960	-,0859
	3,00	1,00	,3374*	,06457	,000	,1827	,4921
		2,00	,1909*	,04385	,000	,0859	,2960
Competitive	1,00	2,00	-,2114*	,05977	,001	-,3546	-,0682
		3,00	-,4239*	,05729	,000	-,5611	-,2867
	2,00	1,00	,2114*	,05977	,001	,0682	,3546
		3,00	-,2125*	,03891	,000	-,3057	-,1193
	3,00	1,00	,4239*	,05729	,000	,2867	,5611
		2,00	,2125*	,03891	,000	,1193	,3057
Achievement	1,00	2,00	-,1916*	,06098	,005	-,3377	-,0455
		3,00	-,3522*	,05845	,000	-,4922	-,2122
	2,00	1,00	,1916*	,06098	,005	,0455	,3377
		3,00	-,1605*	,03970	,000	-,2556	-,0654
	3,00	1,00	,3522*	,05845	,000	,2122	,4922
		2,00	,1605*	,03970	,000	,0654	,2556

Based on observed means



MANOVA- Group Self Expression



- The MANOVA analysis showed statistically significant differences among groups for all the dependent variables (Wilks' Lambda=.93, F=19,63, p<.001) with a medium effect size (Partial Eta Squared=.033).

	Group_Selfexpression	Mean	Std. Deviation	N
sat_life	1,00	5,0878	1,33151	241
	2,00	5,2217	1,10573	1029
	3,00	5,3750	1,07478	1635
	Total	5,2969	1,11282	2905
Fit_level	1,00	2,5851	1,23988	241
	2,00	2,7054	1,17635	1029
	3,00	2,7831	1,26113	1635
	Total	2,7391	1,23096	2905
Social	1,00	2,4613	1,01875	241
	2,00	2,5719	1,04579	1029
	3,00	2,8616	1,11551	1635
	Total	2,7258	1,09438	2905
Competive	1,00	2,5104	,97516	241
	2,00	2,7809	,90949	1029
	3,00	3,0853	,98562	1635
	Total	2,9298	,97677	2905
Achievement	1,00	2,2614	,97528	241
	2,00	2,4914	,92509	1029
	3,00	2,8028	1,00490	1635
	Total	2,6476	,99214	2905



MANOVA-Post Hoc Test



Bonferroni

Dependent Variable	(I) Group_Selfexpression	(J) Group_Selfexpression	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
						Lower Bound	Upper Bound
sat_life	1,00	2,00	-,1339	,07937	,275	-,3240	,0562
		3,00	-,2872*	,07653	,001	-,4705	-,1039
	2,00	1,00	,1339	,07937	,275	-,0562	,3240
		3,00	-,1533*	,04413	,002	-,2590	-,0476
	3,00	1,00	,2872*	,07653	,001	,1039	,4705
		2,00	,1533*	,04413	,002	,0476	,2590
Fit_level	1,00	2,00	-,1203	,08802	,515	-,3312	,0905
		3,00	-,1980	,08487	,059	-,4013	,0053
	2,00	1,00	,1203	,08802	,515	-,0905	,3312
		3,00	-,0777	,04894	,337	-,1949	,0395
	3,00	1,00	,1980	,08487	,059	-,0053	,4013
		2,00	,0777	,04894	,337	-,0395	,1949
Social	1,00	2,00	-,1106	,07754	,461	-,2964	,0751
		3,00	-,4003*	,07476	,000	-,5794	-,2212
	2,00	1,00	,1106	,07754	,461	-,0751	,2964
		3,00	-,2897*	,04311	,000	-,3929	-,1864
	3,00	1,00	,4003*	,07476	,000	,2212	,5794
		2,00	,2897*	,04311	,000	,1864	,3929
Competive	1,00	2,00	-,2705*	,06859	,000	-,4348	-,1062
		3,00	-,5749*	,06613	,000	-,7334	-,4165
	2,00	1,00	,2705*	,06859	,000	,1062	,4348
		3,00	-,3045*	,03814	,000	-,3958	-,2131
	3,00	1,00	,5749*	,06613	,000	,4165	,7334
		2,00	,3045*	,03814	,000	,2131	,3958
Achievement	1,00	2,00	-,2300*	,06977	,003	-,3971	-,0629
		3,00	-,5414*	,06727	,000	-,7025	-,3803
	2,00	1,00	,2300*	,06977	,003	,0629	,3971
		3,00	-,3114*	,03879	,000	-,4043	-,2185
	3,00	1,00	,5414*	,06727	,000	,3803	,7025
		2,00	,3114*	,03879	,000	,2185	,4043

Based on observed means



Conclusions & Implications



Demographic Profile

- Middle-Aged (40+)
- High Educational Level
- Males
- Majority Not Affiliated in Running Clubs

Implications

- Attractive Group
- Growth of Running Clubs
- Targeting to Females





Conclusion & Implications



Three Segments

- High Involved: Majority

Excited to Run

Running is Central in their Life

Develop an Identity as “Runners”

Implication: Attractive Target groups

- Moderate Involved: Second largest group

Goal: to increase their involvement level

- Low Involved (minority)
- They are not frequent runners
- They do not take part in many running events
- Targeted to increase their involvement Level





Conclusion & Implications



- Males are more Involved
- More educated individuals are more Involved
- Motivation plays a role in the development of Running Involvement
- Participation in Running involves is linked with Life Satisfaction

In order to increase involvement participants should satisfy the following motives

- Improve fitness/health,
- Feel the competition aspect
- Run in a social environment
- Feel that they have achieved their running goal





Future Research



- Running Events under the COVID19 situation
- Differences in the Motives
- Virtual Running



Thank you!



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Co-funded by the
Erasmus+ Programme
of the European Union

