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RELIABILITY AND VALIDITY OF THE ITALIAN SMART QUESTIONNAIRE (SMART-Q)

AFFIDABILITÀ E VALIDITÀ DELLO QUESTIONARIO ITALIANO SMART (SMART-Q)

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Abstract
SMART is the acronym for Sports, Meals, Activities, Relationships and Technologies. The SMART questionnaire (SMART-Q) has been developed following the Civil Educational Approach by a multidisciplinary team of researchers from Italy and United Kingdom Universities. The questionnaire aims to identify the adolescents at a higher risk of un-healthy behaviours (defined as situations in which adolescents can be capped with criminal behaviours, drug or technology addictions, bullying, and school dropout). Previously studies have used SMART-Q however, its validity and reliability have never been completed. Hence, the following study aims to explain the structure of the SMART-Q and its domains and investigates the questionnaire reliability and validity with repeated measures in a young cohort who took part in the Sport Senza Frontiere over the summer of 2021. The construct validation was conducted through Exploratory Factor Analysis, obtaining the values for Kaiser–Meyer–Olkin index (0.941) and Bartlett's test ($\chi 2 = 3813.903$, Df = 325, $p \leq$

0.001), which indicates its suitability for factor analysis. Exploratory Factor Analysis was completed with the principal component method to estimate the factor loadings and specificity, using the varimax rotation method. The results indicate that all questions presented moderate reliability. In conclusion, the proposed instrument is valid and applicable, meeting all the parameters necessary for its validation. However, it should be additionally implemented to monitor the correlation between items and its reliability. So it is recommended to use the SMART-Q with caution. Finally, the complete questionnaire with scoring values is reported at the end of the document in the Appendix.

SMART è l'acronimo di Sport, Movimento, Alimentazione, Relazioni e Tecnologie. Il questionario SMART (SMART-Q) è stato sviluppato seguendo la Civil Educational Approach da un gruppo multidisciplinare di ricercatori provenienti da Università italiane e britanniche. Il questionario mira a identificare gli adolescenti col più alto rischio di comportamenti pericolosi (definiti come situazioni in cui gli adolescenti possono essere colpiti da comportamenti criminali, dipendenze da droghe o tecnologie, bullismo e abbandono scolastico). Precedenti studi hanno utilizzato lo SMART-Q, tuttavia, la sua validità ed affidabilità non sono mai state misurate. Il seguente studio spiega la struttura dello SMART-Q ed indaga sull'affidabilità e la validità del questionario attraverso misure ripetute in un gruppo di adolescenti che ha partecipato a Sport Senza Frontiere. La convalida del costrutto è stata condotta tramite analisi esplorativa fattoriale, ottenendo i valori dell'indice Kaiser (0.941) ed il test di Bartlett ($\chi 2 = 3813.903$, $Df = 325$, $p \leq 0.001$). La successiva analisi fattoriale esplorativa è stata completata con il metodo delle componenti principali per stimare i carichi dei fattori e la specificità, utilizzando il metodo della rotazione varimax. I risultati indicano che le domande presentano un'affidabilità moderata. In conclusione, lo SMART-Q è valido ed applicabile, rispettando tutti i parametri necessari alla sua validazione. Tuttavia, dovrebbe essere ulteriormente implementato per monitorare la correlazione tra gli elementi e la sua affidabilità. Quindi si consiglia di utilizzare SMART-Q con cautela. Infine, il questionario completo con i valori di punteggio è riportato alla fine del documento in Appendice.

Keywords: Sports Science, Pedagogy, Validity, Reliability, Adolescents, Health, Wellbeing, Social Constructivism, Questionnaire, Education

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1. Introduction

SMART is the acronym for Sports, Meals, Activities, Relationships and Technologies, figure 1. The SMART questionnaire (SMART-Q) has been developed by a multidisciplinary team of researchers from the University of Naples Parthenope (Italy) and the University of Derby (United Kingdom). The questionnaire aims to identify the adolescents at a higher risk of unhealthy behaviours (defined as situations in which adolescents can be capped with criminal behaviours, drug or technology addictions, bullying, and school dropout). The SMART-Q has been developed following the Civil Educational Approach (Manov, 2019), previously used in other studies (Ambra et al., 2019; Ferraro et al., 2020a; Ferraro et al., 2021; Iavarone, 2009; Iavarone & Girardi, 2018). However, a SMART-Q validity and reliability analysis have never been completed before. Hence, the following study aims to explain the structure of the SMART-Q and its domains and to investigate its reliability and validity with repeated measures in a young cohort who took part in the "Sport Senza Frontiere" project (described below). Finally, the complete questionnaire with scoring values has been reported at the end of the document (Appendix A). We believe this manuscript can be an opportunity to open discussion and share the tool we have developed with the sports, social science and pedagogic communities, hoping it can be further used and implemented in the upcoming years.

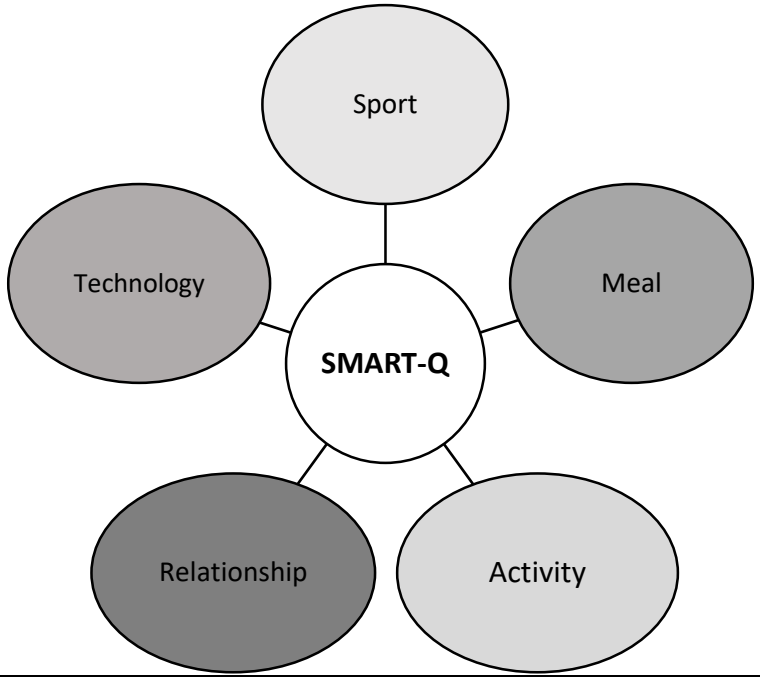

Figure 1. Representation of the SMART-Q and its five domains

1.1 SMART-Q Domains

1.1.1 Sports

Adolescence involves physical and cognitive changes (Giordano et al., 2017). During this period of life, situations can occur that may be of conflict, transgression, misunderstanding and unmet emotional needs (Waite et al., 2021). Sports and recreational physical activities are positive mechanisms for supporting adolescents. For example, a recent study that included yoga combined with sports activities positively influences adolescents' sociality, self-esteem, resilience, and happiness (Yook et al., 2017). Additionally, sport-related activities seem to have positive effects, in terms of prevention, on alcohol and problematic drug consumption (Kwan et al., 2019). The acquisition of a correct lifestyle, induced by the practice of sports, also limits the compulsiveness of the adolescent in the intake of food resulting in a surplus of calories that go beyond the actual energy needs (Montesano & Conte, 2017). A study of 2378 adolescents in South Korea concerning their participation in sporting activities showed that playing sports significantly lowers levels of aggression towards themselves and others (Lee & Lim, 2019).

Another study reported that a physical education programme significantly improves emotional intelligence and wellbeing (Luna et al., 2019). Other encouraging data in terms of self-control and improvement in the perception of cognitive image has been reported in the practice of Tai Chi in adolescence, with additional positive effects on school life (Bao & Jin, 2015). In addition to being an important protective factor against various diseases, sport also provides information about the individual's quality of life and how they use part of their free time. It can be an essential indicator of an individual's body composition and a reliable predictor of sedentariness (Meleleo et al., 2011). Additionally, sports and related activities are valuable tools to learn self-discipline and self-regulation with positive effects on controlling bad habits and having a greater propensity to adopt a healthy and conscious lifestyle (Englert, 2016).

1.1.2 Meals

A healthy and balanced diet is essential for physical and psychological wellbeing (Scartabelli et al., 2019). In recent decades, childhood obesity has been a pathology rising in western countries (Summerbell et al., 2005) both as children and adolescents are engaged to a greater extent in sedentary activities due to the use of various technologies and due to the increased consumption of poor-nutrients high-fat foods (Carlson et al., 2012). A further reason that may have contributed to the increase in childhood obesity is the tendency for children and adolescents to consume more "snacks". Indeed, adolescents tend to avoid fruit and vegetables while consuming excessively high-calorie food (Rasmussen et al., 2018). These foods can represent a risk factor for various diseases such as hypertension, cerebrovascular and cardiovascular diseases, cancer, osteoporosis, tooth decay and obesity (Jones et al., 2018).

Diet quality has been associated with adolescents mental health and, in particular, unhealthy eating is related to internalising disorders such as depression, low mood and anxiety (Molendijk et al., 2018). Therefore, it is necessary to promote food education in the younger generations. In particular, given that young people spend most of their time in school, school-tailored activities are indispensable (Luszczynska et al., 2016) and should consider the influence of socioeconomic inequalities on people's eating behaviours by providing adequate nutritional information. In addition, regulatory interventions would also be necessary to limit the excessive proliferation of commercial establishments that distribute foods that are harmful to health (e.g. junk food).

1.1.3 Activities

Physical activities catalyse anger, aggression, and frustration, emotions that can manifest themselves in the adolescent period and translate into violent bodily acts. The educational and didactic intervention of physical activities guides the identity definition of a young person through the acceptance and enhancement of corporeality, beyond social idealisations and cultural conditioning that can undermine self-confidence (Coco, 2014). The three main areas of intervention in physical activities can be summarised as i) movements and motor activities that improve the body's functionality (Yıldırım et al., 2011) ii) attention, memory, concentration, and perseverance that affect cognitive functions stimulated by the experience of movement (Khan & Hillman, 2014) iii) physical activity that contributes to emotional development.

Indeed, the motor experience activates can be used as a dialogue that opens to the exploration of the affective and relational world (Snedden et al., 2019). Therefore, physical activities can contribute to the achievement of an excellent state of mental health and correct adolescents' social positioning (Orben et al., 2020) through a pedagogical and didactic approach that considers the 'trends' of the new generations. These aspects have been considered in the SMART-Q since physical activities substantially impact brain plasticity up to late adulthood (Erickson et al., 2013) and can be an ally to combat antisocial behaviours in adolescents (Owen et al., 2016).

1.1.4 Relationships

In adolescence, relationships with peers become more intimate and stable; therefore (Erdley & Day, 2017). These relationships, characterised by the search for independence from family, become indispensable for cognitive, emotional and socio-relational development (Nelson et al., 2016). In particular, peer relationships offer young people the opportunity to learn and practice social interaction skills such as co-operatively maintaining close relationships, managing communication, resolving conflicts and maintaining a bond based on trust and intimacy. Furthermore, relationships with peers also represent adolescents with sources of information on different life situations to be understood. Young people who report having close and intimate friendships show better mental health, better psychosocial adaptation, and more adaptive response to stress (Demir et al., 2013; Wilkinson, 2010). In particular, intimate friendships are characterised by higher levels of attachment, support and strengthening of self-esteem.

During adolescence, friends and relationships also become a primary source of social support, partly replacing parents' support. Having friends allows adolescents to satisfy various needs related to the general wellbeing of an individual (Aral & Walker, 2012), such as feeling a sense of alliance and security, feeling part of a group and perceiving affection.

Loneliness is usually defined as an adverse emotional reaction to the experience of an insufficient quantity or quality of social relationships (Shiovitz-Ezra & Leitsch, 2010). It can lead to various physical or psychological problems (Qualter et

al., 2013). However, friendships and acceptance by the peer group can also determine negative implications often related to the tendency of adolescents to imitate risky behaviours (Balsa et al., 2011; Christakis & Fowler, 2013). In this regard, adolescents can be particularly influenced by the contents of their social networks (Aral & Walker, 2012), which can represent a danger (Moreno et al., 2016). However, the relationship between internet use and mental health is still not fully understood (Bélanger et al., 2011).

1.1.5 Technologies

The use of technologies by adolescents from industrialised countries is constantly increasing (Lenhart et al., 2015). The term "screen technology" refers to devices such as televisions, computers and smartphones, which allow involvement in various activities. In the United States, 95% of teenagers have a mobile device, and 89% also have a smartphone (Rideout & Robb, 2018). In Europe, 80% of young people own a mobile phone or smartphone (Mascheroni & Ólafsson, 2014). The age of access to these devices progressively decreases and often starts early in elementary school (Odgers, 2018). Technology can represent a helpful tool for maintaining relationships and acquiring knowledge, but it can also be used improperly or excessively to represent a risk factor for the cognitive and affective sphere of the individual (Nasaescu et al., 2018). The use of social media through technological devices represents one of the most used socialisation contexts by adolescents (Yau & Reich, 2018). In this regard, it has been verified that adolescents who typically use social networks moderately, compared to those who do not, have more feelings of peer affiliation and report less loneliness (Teppers et al., 2014). However, these results are still under investigation (Yang & Bradford Brown, 2016).

Excessive use of technological devices is also implicated in sedentary behaviour (Lourenço et al., 2019). However, some video games represent opportunities for physical activity stimulating movement through involvement in exciting and fun games (González et al., 2018).

The results of various studies show that both the use of computers and the type of activity performed contribute significantly to explaining how the use of technologies influences individuals' wellbeing and cognitive functioning (Nesi et al., 2017). However, these results are contradictory, and additional research is necessary to understand the effects of technologies on adolescents.

2. Materials and Methods

The validity of an instrument is directly related to how it measures what it intends to measure. Therefore an instrument is valid when its construction and applicability allow it to measure its target (Field, 2013). Hence a full content validity, face validity, criterion validity, and construct validity with Pearson product-moment correlation were carried out using SPSS version 27.

2.1 SMART-Q Reliability

The test-retest procedure was employed to verify the instrument’s reliability. The research team applied the instrument to the same cohort at baseline and after three weeks. The instrument’s reliability was verified through Cronbach’s alpha, calculating the existing correlation between each item of the test and the remaining items or the total score.

2.2 Sport Senza Frontiere

Sport Senza Frontiere (trasl. Sports Without Boundaries) was funded in 2011 in Rome to combat poverty and social inequality through projects that use sports to include and promote minors at risk. Thanks to the increasing recognition by policies and institutions (nationally and in the European Union) the Association has experienced a significant expansion that has quickly led to becoming an agent of social changes at a national level, passing from 15 minors in 2011 to more than 500 beneficiaries in 2020. Starting from 2015, the Association began to operate stably and continuously in all the municipalities of Rome, Naples, Milan, Turin, and Bergamo. More details can be found at https://www.sportsenzafrontiere.it/

2.3 Participants and data collection

The SMART-Q was administered at baseline and after three weeks in different locations over the summer of 2021 by trained staff members of the Sports Senza Frontiere. Before compilation, each tutor/parent had signed a consent form, and enough time and explanation were provided to the tutor/parent and the child to understand the purpose of the questions. Additionally, the questionnaires were administered, and data were anonymized according to the guidelines of the 1975 Declaration of Helsinki, revised in 1993

3. Results

3.1 Anthropometric values

A total of 248 adolescents (F 99; M 149) between 9 ± 3 years old took part in the study, 208 completed the SMART-Q at baseline and after 3 weeks. Data were collected from different location in Italy (i.e., Rome n=126; Milan n=14; Genoa = 8; Bergamo n=16; Napoli=10 and others n =74).

3.2 Content Validly

The content validity was carried out to identify the clarity of language, practical pertinence, and theoretical framework. This verification was conducted after the first presentation of the SMART-Q in 2019, where the framework was constructed by a pool of seven researchers from different backgrounds, including pedagogy, psychology, physiology, nutritionist and sports science (Ambra et al., 2019).The questionnaire structure was then presented at the Wellbeing in Education Systems and, according to the panel, did not present any issue regarding its content validity.

3.3 Face Validity

Two studies were carried out, one in 2019 with 108 participants (Ambra et al., 2019) and the other in 2020 with 501 participants (Ferraro et al., 2020b) for a total of 609 participants. The studies reveled that the participants understood the instrument, eliminating the need for changes.

3.4 Construct Validity and Reliability

The Kaiser–Meyer–Olkin (KMO) index, used to verify the suitability of the application of Exploratory Factor Analysis (EFA) for this study's data set, returned a value of KMO = 0.941, which demonstrated that the data were suitable for factor analysis, Bartlett's sphericity test was significant ($\chi 2 = 3813.903$, Df = 325, $p \leq 0.001$), allowing the EFA to be conducted. Hence, the EFA was completed with the principal component method to estimate the factor loadings and specificity, using the varimax rotation method, in a correlation matrix composed of 26 items (questions). The number of factors estimated was determined by assessing the scree plot, employing question retention through the Kaiser–Guttman criterion of the components, results of commonalities for each item reported in table 1 whilst rotator matrix factor is reported in table 2, and table 3 summaries the 5 domains of the SMART-Q.

Table 1. Extraction Method: Principal Axis Factoring

Communalities	**Initial**	**Extraction**
SPORT_Item1	0.348	0.330
SPORT_Item2	0.496	**0.545**
SPORT_Item3	**0.663**	**0.656**
SPORT_Item4	**0.515**	0.453
SPORT_Item5	0.409	0.381
SPORT_Item6	**0.788**	**0.785**
Activities_Item1	0.340	**0.605**
Activities_Item2	**0.599**	**0.658**
Activities_Item3	**0.623**	**0.643**
Activities_Item4	**0.566**	**0.565**
Meal_Item1	0.451	0.458
Meal_Item2	0.389	0.365
Meal_Item3	0.262	0.367
Meal_Item4	**0.659**	**0.600**
Meal_Item5	0.600	**0.565**
Meal_Item6	**0.753**	**0.790**
Meal_Item7	0.476	**0.504**
Meal_Item8	**0.688**	**0.673**
Reletionship_Item1	0.414	0.408
Reletionship_Item2	**0.615**	**0.598**
Reletionship_Item3	**0.707**	**0.698**
Reletionship_Item4	0.470	0.379
Reletionship_Item5	**0.748**	**0.721**
Technologies_Item1	0.515	**0.537**
Technologies_Item2	0.420	0.387
Technologies_Item3	**0.773**	**0.753**

Commonalities for each item reported. For the list of items please refer to Appendix-1

Table 2. Rotated Factor Matrix

Factors	1	2	3	4	5
SPORT_Item1	0.243	0.276	0.309	0.200	0.244
SPORT_Item2	0.284	0.104	**0.672**	0.014	0.040
SPORT_Item3	**0.690**	0.245	0.309	0.154	0.016
SPORT_Item4	0.435	0.353	0.279	0.153	0.196
SPORT_Item5	0.190	0.311	0.259	0.273	0.327
SPORT_Item6	0.590	0.479	0.400	0.215	0.033
Activities_Item1	0.158	0.222	0.078	**0.720**	-0.084
Activities_Item2	0.048	**0.615**	**0.524**	0.026	0.048
Activities_Item3	**0.713**	0.259	0.240	0.098	0.029
Activities_Item4	**0.636**	0.195	0.311	0.004	0.161
Meal_Item1	**0.551**	0.048	0.232	0.037	0.311
Meal_Item2	0.455	0.096	0.205	0.101	0.309
Meal_Item3	0.113	0.100	0.044	-0.077	**0.580**
Meal_Item4	0.443	**0.534**	0.288	0.122	0.144
Meal_Item5	0.278	0.477	0.486	0.153	-0.004
Meal_Item6	0.188	**0.768**	0.376	0.102	0.117
Meal_Item7	**0.506**	0.342	-0.055	0.117	0.337
Meal_Item8	0.318	**0.696**	0.158	0.199	0.152
Reletionship_Item1	0.204	0.236	0.401	0.313	0.230
Reletionship_Item2	**0.581**	0.427	0.223	0.153	0.072
Reletionship_Item3	**0.614**	0.264	0.464	0.155	0.108
Reletionship_Item4	0.287	0.296	0.394	0.165	0.162
Reletionship_Item5	0.324	**0.736**	0.070	0.217	0.148
Technologies_Item1	**0.585**	0.351	-0.060	0.230	0.123
Technologies_Item2	0.342	0.335	0.377	-0.037	0.119
Technologies_Item3	0.299	**0.772**	0.147	0.149	0.156

Principal axis factoring with Kaiser normalization. For the list of items please refer to Appendix-1.

Pearson's correlation was used to verify the intensity of the existing linear association between variables and measure construct validity. A total sample size of 248 adolescents from different backgrounds was tested and retested after three weeks. The results reported showed moderate to high correlation, table 3. At baseline, all Pearson correlations are significant, with P values lower than 0.001 and r values between 0.31 – 0.72. After three weeks of retesting the same cohort, the results show all P values lower than 0.001 and r values between 0.32 – 0.86. To determine the instrument's internal consistency in terms of reliability, Cronbach's alpha was calculated for the existing correlation between each item of the SMART-Q. The Cronbach's alpha of the 27 questions is exhibited in table 3. The α values range from 0.29 – 0.85.

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Table 3. Analysis before and after three weeks for the five domains of the SMART-Q with correlations and Cronbach's Alpha

Questions n = 248	**SMART Total Score** ***Baseline***	**SMART Total Score** ***3 Weeks Follow Up***	**Corrected Item-Total Correlation**	**Cronbach's Alpha if Item Deleted**
Sport Q1	r = 0.62 P < 0.001	r =0.56 P < 0.001	0.56	0.75
Sport Q2	r = 0.53 P < 0.001	r = 0.55 P < 0.001	0.53	0.75
Sport Q3	r = 0.70 P < 0.001	r = 0.75 P < 0.001	0.73	0.74
Sport Q4	r = 0.59 P < 0.001	r = 0.70 P < 0.001	0.67	0.75
Sport Q5	r =0.55 P < 0.001	r = 0.57 P < 0.001	0.55	0.75
Sport Q6	r = 0.63 P < 0.001	r = 0.86 P < 0.001	0.85	0.74
Activities Q1	r = 0.32 P < 0.001	r = 0.40 P < 0.001	0.38	0.75
Activities Q2	r = 0.50 P < 0.001	r = 0.62 P < 0.001	0.60	0.75
Activities Q3	r = 0.66 P < 0.001	r = 0.73 P < 0.001	0.71	0.74
Activities Q4	r =0.64 P < 0.001	r = 0.70 P < 0.001	0.68	0.74
Meal Q1	r = 0.50 P < 0.001	r = 0.58 P < 0.001	0.56	0.75
Meal Q2	r =0.50 P < 0.001	r = 0.56 P < 0.001	0.54	0.75
Meal Q3	r = 0.31 P < 0.001	r = 0.32 P < 0.001	0.29	0.75
Meal Q4	r = 0.67 P < 0.001	r = 0.78 P < 0.001	0.76	0.74
Meal Q5	r = 0.65 P < 0.001	r = 0.70 P < 0.001	0.68	0.75
Meal Q6	r = 0.62 P < 0.001	r = 0.76 P < 0.001	0.75	0.75
Meal Q7	r = 0.50 P < 0.001	r = 0.62 P < 0.001	0.60	0.75
Meal Q8	r = 0.57 P < 0.001	r = 0.74 P < 0.001	0.73	0.75
Relationship Q1	r = 0.52 P < 0.001	r = 0.58 P < 0.001	0.56	0.75
Relationship Q2	r = 0.53 P < 0.001	r = 0.76 P < 0.001	0.75	0.74
Relationship Q3	r = 0.72 P < 0.001	r = 0.79 P < 0.001	0.78	0.74
Relationship Q4	r = 0.56 P < 0.001	r = 0.61 P < 0.001	0.59	0.75
Relationship Q5	r =0.63 P < 0.001	r = 0.73 P < 0.001	0.72	0.75

Technologies Q1	r =0.56 P < 0.001	r = 0.64 P < 0.001	0.62	0.75
Technologies Q2	r =0.44 P < 0.001	r = 0.61 P < 0.001	0.59	0.75
Technologies Q3	r =0.65 P < 0.001	r = 0.75 P < 0.001	0.74	0.75

Moderate to high correlation. At baseline all Pearson correlations are significant with P values lower then 0.001 and r values between 0.31 – 0.72, after three weeks the results show all P values lower then 0.001 and r value between 0.32 – 0.86. Cronbach's alpha was calculated for the existing correlation between each item of the SMART-Q. The Cronbach's alpha of the 27 questions range between 0.29 – 0.85.

4. Discussion and Conclusion

The construct validation was conducted through Exploratory Factor Analysis, obtaining the values for KMO (0.941) and Bartlett's test ($\chi 2 = 3813.903$, $Df = 325$, $p \leq 0.001$), which indicates its suitability for factor analysis. The EFA failed to load on any dimension significantly. According to Kirch et al., the higher the commonality, the greater the explanatory power of a determined item in the question model, and each must present a commonality higher than 0.5 (Kirch et al., 2017). Following our analysis, we reported that only a few values are equal to or above 0.5, indicating that the structure of the questions should be modified. Similar results also appear in the rotator factor matrix, in which some of the questions are positive while others negatively correlate across the five domains. This can be caused by the nature of the questions and the differences between each domain (i.e., eating habits and sports or the use of technologies and activities). Additional analysis is required to understand the relationship between each item and how these can be integrated into positive, highly correlated results.

Regarding reliability, Cronbach's alpha was calculated to determine the instrument's internal consistency. The results indicate that all questions presented moderate reliability. In conclusion, the proposed instrument is valid and applicable, meeting all the parameters necessary for its validation. However, it should be additionally implemented to monitor the correlation between items its reliability. So it is recommended to use the item with caution.

Moving forward, the research is wanted to combine the five domains and modify the questionnaire considering also different age ranges (e.g. 10-12, 12-16, 16-18 years old).

The SMART-Q can be introduced as a research tool, but the data interpretation still requires caution and should be reported along with its contest and limitations.

In conclusion, the five domains of the SMART-Q are essential to understand the health and wellness of adolescents and each domain should be analysed and discussed in more detail to produce a monitoring tool to help predict antisocial behaviour.

Appendix A

The following Appendix reports the SMART-Q in Italian along with the scoring system.

Sports Domain

1) Quale attività sportiva pratichi? _____

2) Hai scelto tu di fare questo sport?

a) Sì, ho scelto io perché mi è sempre piaciuto molto (3)
b) Ho scelto io, ma mi sono fatto aiutare dai miei genitori a scegliere (2)
c) Ho seguito i miei amici e/o fratelli che lo avevano scelto prima di me (1)
d) No, hanno deciso i miei genitori (0)

3) Quante volte a settimana vai al centro sportivo?

a) 1 (0)
b) 2 (1)
c) 3 (2)
d) più di 3 (3)

4) Quanto dura generalmente ciascun allenamento?

a) sempre 1 ora (1)
b) qualche volta mi trattengo più della mia ora (2)
c) spesso mi trattengo di più della mia ora (3)

5) Ti piace gareggiare?

a) Mi piace sempre molto (3)
b) Mi piace quasi sempre (2)
c) A volte mi piace a volte no (1)
d) Non mi piace affatto (0)

6) Come vedi il tuo allenatore?

a) Come un amico (0)
b) Come un capo (1)
c) Come un maestro severo (2)
d) Come un maestro comprensivo (3)

7) Com’è il rapporto con i tuoi compagni di sport?

a) Molto buono con tutti (3)
b) Abbastanza buono, ma ho problemi con qualcuno di loro (2)
c) Mi sono del tutto indifferenti (1)
d) Cattivo, ho problemi con molti di loro (0)

8) Quale altra attività sportiva ti piacerebbe praticare? _____

9) Ti capita durante la giornata di pensare al tuo sport?

a) Si, perché non vedo l'ora di andare (3)
b) Sì, perché ci vorrei andare, ma ho molte cose da fare dopo (2)
c) Non ci penso quasi mai (1)
d) Sì, perché non ci vorrei andare (0)

10) Rinunceresti alla pratica del tuo sport?

a) Si, perché non mi piace affatto (0)
b) Sì, perché mi toglie troppo tempo (1)
c) Sì, ma solo se dovessi iniziare un altro sport (2)
d) No, (3)

Physical Activity Domain

1) Pratichi altri sport occasionalmente?

a) No (0)
b) Sì, ma solo durante le vacanze estive o invernali (1). Quali?_____
c) Sì, una- due volte al mese (2) Quali?_____
d) Sì, una volta alla settimana (3) Quali?_____

2) Fai attenzione alla tua forma fisica?

a) Molto (3)
b) Abbastanza (2)
c) Poco (1)
d) Per niente (0)

3) Riesci a mettere insieme Sport e Studio?

a) Facilmente e serenamente (3)
b) Di solito facilmente, alcune volte meno (2)
c) Con un po' di difficoltà e preoccupazione (1)
d) Con molta difficoltà e preoccupazione (0)

4) I tuoi spostamenti solitamente come avvengono?

a) Con mezzi propri (macchina, motorino ecc.) (0)
b) Con mezzi pubblici (metropolitana, autobus, ecc.) (1)
c) In bicicletta (2)
d) A piedi (3)

5) Durante la settimana ti capita mai di:
(rispondi a tutte le domande)
Fare una passeggiata? [sì] (1) [no] (0)
Andare in bicicletta ? [sì] (1) [no] (0)
Giocare all'aria aperta? [sì] (1) [no] (0)

6) Durante le ore di Educazione Fisica a scuola cosa fai?

a) 2 ore di pratica (in palestra) (3)
b) Un'ora di pratica ed una di teoria (2)
c) 2 ore di sola teoria (1)
d) Non si fa mai educazione fisica (0)

7) Quanto le attività che svolgi al di fuori del centro sportivo influenzano la tua forma fisica?
a) Per nulla (0)
b) Molto poco (1)
c) Abbastanza (2)
d) Moltissimo (3)

Meal Domain
1) Nei giorni in cui fai sport mangi diversamente?
a) Sì, mangio di meno a pranzo e un panino o uno snack (patatine o una merendina) dopo lo sport (0)
b) Sì, mangio di meno a pranzo e di più a cena (1)
c) No, mangio come negli altri giorni (2)
d) Sì, mangio di meno a pranzo e la frutta dopo lo sport (2)
e) Si, mangio un po' in più perché sento di aver bisogno di più energia (3)

2) Generalmente quali pasti fai durante la giornata?
a) Colazione, pranzo cena e merenda a metà mattina e pomeriggio (3)
b) Colazione pranzo e cena (2)
c) Colazione e cena con un panino a pranzo (2)
d) Solo pranzo e cena, non faccio mai colazione (1)
e) Solo pranzo e cena, non faccio mai colazione, ma mangio diversi snack durante la giornata (0)

3) Qualche volta ti capita di saltare un pasto?
a) No (3)
b) Sì, qualche volta salto la merenda (3)
c) Sì qualche volta salto la colazione, ma faccio sempre merenda a metà mattina e/o pomeriggio (2)
d) Sì, qualche volta salto sia la colazione che la merenda di metà mattina e pomeriggio (1)
e) Sì qualche volta salto la cena o il pranzo, ma faccio sempre merenda a metà mattina e/o pomeriggio (1)
f) Sì qualche volta salto il pranzo o la cena e non faccio la merenda a metà mattina e pomeriggio (0)

4) Quali di questi snack fai fuori pasto? (rispondi a tutte le domande)
a) Patatine fritte e/o biscotti salati [sì] 0 [no] 1
b) Merendine confezionate e/o biscotti dolci [sì] 0 [no] 1
c) Caramelle e/o altri dolciumi [sì] 0 [no] 1

5) Cosa bevi generalmente durante la giornata (escluso il fine settimana) oltre l'acqua? (rispondi a tutte le domande)
a) Bibite gassate/ zuccherate (coca cola, aranciata, red bull, succhi di frutta industriali ecc) [sì] (0) [no] (1)
b) Spremute fresche e centrifugati di frutta [sì] (1) [no] (0)
c) Integratori (Energade; Gatorade ecc.) [sì](0) [no] (1)
6) ti capita mai di bere bevande alcooliche?

a) Sì spesso, (tutte le settimane) (0)
b) Sì qualche volta (una-due volte al mese) (1)
c) Sì, solo per brindare durante le festività (2)
d) No, non bevo mai alcool (3)

7) Come reputi le tue abitudini alimentari?
a) Cerco di fare attenzione a quello che mangio (3)
b) Cerco di fare attenzione, ma non sempre ci riesco (2)
c) Non mi preoccupo particolarmente di quello che mangio (1)
d) Mangio di tutto senza pensarci (0)

8) Mangi la frutta tutti i giorni?
a) Si, più volte al giorno (3)
b) Sì una sola volta al giorno (2)
c) No, la mangio solo qualche volta (1)
d) No, non la mangio quasi mai (0)

9) Mangi verdure tutti i giorni?
a) Si, più volte al giorno (3)
b) Sì, una sola volta al giorno (2)
c) No, la mangio solo qualche volta (1)
d) No, non la mangio quasi mai (0)

10) Quante volte vai al fast-food (McDonald, Burger King, ecc.)?
a) Molto spesso (più di una volta a settimana) (0)
b) Spesso (massimo una volta a settimana) (1)
c) Qualche volta (una o due volte al mese) (2)
d) Raramente o mai (meno di una volta al mese) (3)

11) Quanto ritieni le tue abitudini alimentari influiscano sulla tua forma fisica?
a) Moltissimo (3)
b) Abbastanza (2)
c) Poco (1)
d) Per niente (0)

12) A che ora abitualmente vai a dormire la sera nei giorni di scuola?
a) Alle 22.30 o prima (3)
b) Alle 23.00 circa (2)
c) Intorno alle 23.30 (1)
d) Dopo mezzanotte (0)
e) Non ho un orario preciso (0)

13) A che ora abitualmente ti svegli nei giorni di scuola?
a) Alle 6.30 o prima

b) Alle 7.00 circa
c) Intorno alle 7.30
d) Dopo le 8.00
e) Non ho un orario preciso (0)

In questo caso i punteggi sono calcolati in base alle risposte precedenti: se dal calcolo (risposte 12 e 13) i) per 8 e le 9 ore di sonno si assegna il punteggio 3; per 8 ore si assegna 2; per 7 ore si assegna 1; meno di 7 ore si assegna 0. NB la risposta (e) ha sempre punteggio 0.

14) Quanto pensi che il sonno influisca sulle tue condizioni fisiche?
a) Moltissimo (3)
b) Abbastanza (2)
c) Poco (1)
d) Per niente (0)

Relationship domain
1) Cosa fai abitualmente nel tuo tempo libero?
a) Sto da solo (guardo la televisione e/o gioco con tablet/telefono/play station) (0)
b) Esco/gioco all'aria aperta da solo (1)
c) Sto con amici (guardiamo insieme la televisione e/o giochiamo con tablet/telefono/play station (2)
d) Esco/gioco all'aria aperta con amici (3)

2) Conosci tante persone, ma quanti amici veri hai?
a) non ho nessun vero amico (0)
b) ho molti veri amici (1)
c) uno (2)
d) 2-3 (3)

3) Di solito quante volte a settimana esci per svago con i tuoi amici?
a) Non esco quasi mai con amici (0)
b) Una sola (1)
c) 2 a 3 (3)
d) Quasi tutti i giorni (2)

4) Generalmente con chi trascorri il fine settimana?
a) Con i miei amici (3)
b) Qualche weekend con i miei amici qualche weekend a casa (con genitori o amici/parenti) (2)
c) Con i miei genitori ed i loro amici/parenti(1)
d) Da solo con i miei genitori (0)

5) Cosa fai solitamente, nel weekend quando esci con i tuoi amici?
a) Passeggiamo e chiacchieriamo (3)
b) Ci incontriamo solitamente nello stesso posto (strada, piazza, ecc.) e passiamo lì un po' di tempo (2)
c) Andiamo a mangiare da qualche parte (pub, pizzeria, bar) (1)

d) Andiamo al cinema o in sala giochi (0)

6) Quanto ritieni le tue abitudini di "tempo libero" influiscano sulla tua forma fisica?

a) Moltissimo (3)
b) Abbastanza (2)
c) Poco (1)
d) Per niente (0)

Technologies domains

1) Dopo la scuola quanto guardi la TV?

a) La guardo sempre anche mentre faccio altro (0)
b) La guardo ma solo dopo aver fatto i compiti (1)
c) La guardo solo se non ho niente di meglio da fare (2)
d) La guardo poco o non la guardo affatto (3)

2) Cosa guardi di più in tv?

a) Talent e reality show (0)
b) Quiz e varietà (1)
c) Film e serie TV (2)
d) Sport ed approfondimenti sportivi (2)
e) Attualità e documentari (3)

3) Dopo la scuola quanto usi smartphone e tablet?

a) Li uso sempre anche mentre faccio altro (0)
b) Li uso ma solo dopo aver fatto i compiti (1)
c) Li uso solo se non ho niente di meglio da fare (2)
d) Li uso poco o non li uso affatto (3)

4) I tuoi genitori hanno fissato delle regole per l'uso di smartphone e tablet?

a) Non hanno stabilito regole (me li fanno usare tutto il tempo che voglio) (0)
b) Hanno fissato la regola che posso utilizzarli solo dopo aver fatto i compiti (1)
c) Hanno fissato un numero preciso di ore (2)
d) Hanno fissato un numero preciso di ore ma posso usarli più a lungo se devo fare qualcosa di utile o interessante (3)

5) Cosa fai con Smartphone, computer e Tablet? (rispondi a tutte le domande)

a) Li uso per giocare [sì](0) [no](1)
b) Li uso per contattare gli amici [sì](0) [no](1)
c) Li uso per ricerche di scuola [sì] (1) [no] (0)

6) Dopo la scuola quanto giochi con la play station o simili (Xbox, Playstation, ecc.)?

a) Ci gioco sempre (0)
b) Ci gioco sempre, ma solo dopo aver fatto i compiti (1)
c) Ci gioco solo se non ho niente di meglio da fare (2)
d) Ci gioco poco o non ci gioco affatto (3)

7) Quali sono le regole che i tuoi genitori hanno fissato per giocare con la Play Station o simili (Xbox, Playstation ,ecc.)?

a) Non ho regole perché non ce l'ho
b) Non ho regole, mi fanno giocare per tutto il tempo che voglio e scelgo da solo con quali giochi (0)
c) Non ho regole su quanto tempo posso giocare, ma mi hanno proibito alcuni giochi (2)
d) Hanno stabilito un numero preciso di ore, ma scelgo io con quali giochi (1)
e) Hanno stabilito un numero preciso di ore e mi hanno proibito alcuni giochi (3)

8) Quanto pensi che l'uso di questi strumenti tecnologici influisca sulla tua forma fisica?

a) Moltissimo (3)
b) Abbastanza (2)
c) Poco (1)
d) Per niente (0)

9) pensi che le tecnologie possano essere pericolose?

a) Si, dipende dall'uso che se ne fa (2)
b) Si, ma certe cose capitano solo a quelli che non le sanno usare (1)
c) Si, bisogna essere sempre molto attenti (3)
d) No, non penso proprio che siano pericolose (0)

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