CONSIDERING THE SOCIO-CULTURAL FIELD OF HAZARDOUS BEHAVIOURS: A CROSS-CULTURAL STUDY ON PROBLEM GAMBLING AMONG MALTESE AND ITALIAN PEOPLE

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The literature on problem gambling (PG) has received little attention regarding the role of how people make sense of their social experiences and community settings. Based on a semiotic and cultural perspective, the present study used a cross-national approach to investigate whether there are significant differences in the socio-cultural dimensions characterizing problem gamblers in two different European countries, Italy and Malta. Perceived social support, cultural models and PG were assessed in a convenience sample of 134 subjects, balanced by gender, job status and educational status (Malta n=67; mean age 42.00±16.268; Italia n=67; mean age 43.37±14.446). Structural Equation Modelling (SEM) was applied to test the relationships among variables; multi-group technique was used to test for any effects defined by the country variable. The findings show that the lower the perceived social support, the higher the likelihood of PG for both national groups. Maltese and Italians exhibited differences vis-à-vis the cultural models that constitute a risk factor for PG. In the case of Italy, a devaluation of the context one belongs to, along with the feeling that one can only rely on oneself, is related to PG. In the case of Malta, PG appears to be related to a trusting attitude toward the micro- and macro-social context. This study suggests that understanding why people engage in hazardous behaviours requires an in-depth consideration of the socio-cultural contexts and networks where people's ways of evaluating their social experience develop. Implications for designing community PG prevention interventions are discussed.

Keywords: *problem gambling, socio-cultural context, social support, cultural models, Italy, Malta*

1.   Introduction

The present study aims to address the role of the social and cultural context in the onset and maintenance of hazardous behaviours. Our analysis focuses on problem gambling; the term is traditionally defined as a loss of control over gambling behaviours leading to negative consequences (Lesieur & Blume, 1987), including family breakdown, health problems, economic and legal consequences (Sulkunen et al., 2018). Yet, the theoretical standpoint guiding the study is not confined to this specific object. Broadly, it promotes an approach to intervention on health problems and hazardous behaviours that emphasizes the interweaving

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of subjective experience and socio-cultural context. That is, it acknowledges the need to position prevention approaches in the everyday worlds that people inhabit (Borrel & Boulet, 2005). This means *decentring* the deficit model of understanding and treatment (see i.e. Ioannidis, Hook, Wickham, Grant, & Chamberlain, 2019; Perales, Navas, & Jara-Rizzo, 2019) – which typically characterizes the clinical psychological approach to people's problems, including problem gambling – and moving towards a more holistic cultural, community-based approach. This bridges the conceptual (and therefore also practical) gap between subjective experience and societal processes (Borrel & Boulet, 2005; Raylu & Oei, 2004).

Problem gambling has established itself as a social phenomenon with important implications for public health. Gambling studies show that most of the population in Western societies have gambled at least once in their lives, and there are more gamblers than non-gamblers (Calado & Griffiths, 2016; Banks, 2016; Young, 2010; Abbott et al., 2004). It has been estimated that in Europe there could be up to ten million people that show a problem with gambling (Jensen, 2017).

The mainstream approach to the study of problem gambling determinants revolves around an "epistemology of sickness and disease" (Reinarman, 2005), implying that the gambler acts in a social vacuum of sorts. However, an increasing awareness of the relationships between availability, participation, exposure, political and social contexts, and problems related to gambling (Williams, Volberg, & Stevens, 2012) is leading a growing number of scholars to better consider the role of community and socio-cultural factors, as opposed to focusing exclusively on the individual (Borrell & Boult, 2005; Sammut & Buhagiar, 2017).

It was observed that an approach to the excessive use of gambling by some individuals in terms of medical disease could serve to deflect attention away from the product's potentially problematic role in promoting that use (Livingstone et al., 2018; Schüll, 2012). Other scholars pointed out that the extent of the harmful consequences related to gambling depends, at least in part, on the historical and cultural contexts in which the behaviour is shaped, experienced, communicated, and responded to by others (Westberg, Beverland, & Thomas, 2017; Ho, 2017; Savolainen et al., 2019). For instance, Miller and Thomas (2017) show that a discourse focused on the gambler's responsibility increases the stigma associated with harmful gambling and that this stigma is an important barrier to the request for help.

Studies taking a socio-cultural approach show the key role of micro and macro-social contexts in the onset and maintenance of maladaptive patterns of behaviour, including gambling-related problems (Reith & Dobbie, 2011; 2013). Social disconnectedness, perceived isolation and lack of social support have constantly been found to present distinct associations with mental health (De Jong Gierveld, van Tilburg, & Dykstra, 2018; Ngwenya et al., 2018). Many scholars from different perspectives suggest that the weakening of social bonds increases the likelihood of involvement in harmful behaviours (Patton et al., 2006). Contrarily, the strengthening of social support within communities influences the coping process and buffers the effects of stressors on health (see Heaney & Israel, 2008). In longitudinal community studies and cross-national studies, the role of perceived social support was particularly emphasized in cases of problem gambling. It was found that non-gamblers and social gamblers perceive that they have more social support from parents and friends than at-risk and problem gamblers (Bilt, Dodge, Pandav, Shaffer, & Ganguli 2004; Molinaro et al., 2014). Problem gamblers were also found to experience a lack of family cohesion and a general lack of early family communication (Saugeres, Thomas, Moore, & Bates, 2012). Other scholars point out the role of people's social and cultural background in defining the meaning that gambling takes on for them (Nekich & Ohtsuka, 2016). Abt, Smith, and Christiansen (1985) point out that a gambling situation is "defined and structured by

social and legal norms that are culturally consistent with the dominant sociocultural environment outside the gambling situation" (p. 84).

The role of social and cultural factors has also been studied for a better understanding of the relationship between socio-demographic characteristics and problem gambling. An enormous amount of literature on age and gender-related gambling problems is available (inter alia: Abbott, Romild, & Volberg, 2018; Delfabbro, Thomas, & Armstrong, 2018; Subramanian et al., 2015). However, the actual research is not conclusive. Different studies and reviews point out that the prevalence of problem gambling is particularly high among young males when compared to adults (Subramanian, 2015; Volberg et al., 2010). Another earlier review also found a higher prevalence of PG among men, but no differences related to age (Dowling et al., 2017). It is beyond the scope of this article to offer a comprehensive analysis of the factors which might explain the discordant results. Our more limited aim is to suggest that demographic variables do not necessarily affect problem gambling in a context-invariant way. For instance, few authors have suggested that the amount and quality of the leisure pursuits that are available and accessible to older adults, as well as the strengths of their social network, have an impact in their approach to gambling (Alberghetti & Collins, 2015). Furthermore, personal and socio-cultural meanings in terms of which people interpret being female or male, young or old, may be just as important in some qualified respects (Raylu & Oei, 2004).

The present work starts from an acknowledgement of the role of people's networks in influencing the ways people act and deal with their problem gambling in life; at the same time, it emphasises the need to understand the personal and socio-cultural meanings (Valsiner, 2007) through which people interpret their social experience and community settings (Sonn, Arcidiacono, Mannarini, & Brodsky, 2015).

Several studies have suggested a relationship between psychological sense of community (SOC), subjective well-being and the increase in the quality of social life. At the core of SOC are feelings of membership and emotional connection (Hyde & Chavis, 2007; Mannarini, Rochira, & Talò, 2012), which in turn can influence relationships among individuals in communities and collective behaviours (McMillan and Chavis, 1986). While on one hand, social isolation can adversely affect healthy social engagement, on the other hand attachment and sense of community belonging can lead to positive health outcomes (Holt-Lunstad, Smith, & Layton, 2010; Kitchen, Williams, & Chowhan, 2012). It has been argued that SOC has a strong contextual nature and it cannot be clearly separated from the meanings that individuals attach to their community (Mannarini & Fedi, 2009) or local culture. The need to obtain knowledge of the local culture of a community was emphasised in order to plan strategies of intervention addressing individual and group problems. (Mannarini et al., 2012)

Based on a semiotic and cultural perspective (Picione & Freda, 2016; Salvatore, Valsiner, & Veltri, 2019), we conceive meanings as the lens through which people construct and enact their life experience; in particular, with the term "cultural model" we refer to a particular system of generalized meanings, spreading over both generalized and specific aspects of the subject's experience, through which each person constructs and enacts his/her own interpretation of the cultural system he/she is embedded in (Mannarini et al., 2012; Venuleo, Mossi, & Calogiuri, 2018).Three aspects are worth emphasizing with regard to these meanings. First, they are *generalised*: they do not concern a specific aspect but encompass experience as a whole. For instance, take the idea of "having success in life is a matter of luck". Second, a generalized meaning has an *affective valence*; as such, it has to be conceived not merely as an abstract judgment, but as a way of being predisposed to act and react in a certain way. Third, the meanings composing cultural models are intrinsically *intersubjective*; they emerge from encounters with other people and other viewpoints, acting in a particular

socio-cultural milieu (Salvatore et al., 2018). Based on the view of the cultural models described above, in previous works (Venuleo *et al.*, 2018; Venuleo, Mossi, & Marinaci, 2017; Venuleo, Mossi, Calogiuri, 2018), it was argued that cultural models organise a certain representation of what a certain practice, like gambling, means (i.e. a chance to pursue happiness in an unhappy life, a way to evaluate ones' good or bad luck, a harmful habit). In turn, this meaning orients the subject's way of approaching (or avoiding) particular practices. In different community contexts, different cultural models might work as either protective factors or as risk factors for problem gambling; in other words, the content, the strength, and the nature of the relationship between cultural models and problem gambling may be context-specific.

2. The current study

This study explores the impact of perceived social support and cultural models through which people interpret their social experience and identity in predicting problem gambling among Italian and Maltese people.

Malta and Italy share an economy strongly influenced by gambling. Malta dominates the online betting market (Forrest, 2012), ranking among the jurisdictions hosting the highest number of online transactions and gambling websites (Williams, Wood, & Parke, 2012; Wood & Williams, 2007). Economic growth related to the sector has also been sustained over the years (Malta Gaming Authority [MGA], 2018a), due also to attractive gaming tax rates (Häberling, 2012). Regarding Italy, over the past 10 years, the gambling market has doubled in size (Eurispes, 2019) and actually the gambling industry employs more than 120,000 people, making it the third largest employer in the country. With regard to the gambling prevalence rate, the Malta Gaming Authority (MGA) (2018b) recently reported that about 52.8% of the adult population spent money on some form of gaming activity in 2017 and that from 1% to 2% of the Maltese population perceive gambling as having adverse effects on their lives. However, there is very little empirical data concerning gambling and problem gambling in Malta (Griffiths, 2009); in fact, a recent systematic literature review on problem gambling made no mention of the country at all (see Calado & Griffiths, 2016). As regards Italy, according to the Management Report prepared by the Customs and Monopolies Agency, at the end of 2017, 17 million Italians were estimated to gamble. Two gambling prevalence studies (i.e., Barbaranelli, Vecchione, Fida, & Podio-Guidugli, 2013; Bastiani et al., 2013) provided an estimated rate for pathological gambling (PG) between 1.3% and 2.2%. These percentages place the two countries within the typical European average of 1% - 3.4% (Calado & Griffiths, 2016).

Whereas previous studies on the Italian context have shown that problem gamblers, when compared with non-problem gamblers, tend to perceive lower social support and to express a view of the social context as being an absolutely unreliable and anomic environment (Venuleo *et al.*, 2016), there are no such studies in the Maltese context. The use of a cross-national approach aims to investigate whether there are significant differences in the socio-cultural dimensions characterizing problem gamblers in these two different European countries.

2.1 Hypotheses

Based on previous literature, it is expected that – both among Italian and Maltese respondents – the lower the perceived social support, the higher the probability of problem

gambling (*hypothesis 1*) and that different cultural models have different effects on the probability of problem gambling (*hypothesis 2*). Furthermore, since the capacity of a cultural model to sustain social adaptation cannot be defined apart from people's life contexts, it is expected that the impact of cultural models is context-specific: in the two different countries, different cultural models may be involved in the probability or otherwise of engaging in problematic gambling behaviour (*hypothesis 3*).

3. *Method*

3.1 *Data collection and sample*

The study was conducted in Malta and Italy, with a convenience sample of 134 subjects (Malta n=67; mean age 42.00±16.268; Italia n=67; mean age 43.37±14.446). In order to facilitate recruitment among people with different levels of gambling involvement – non-gamblers, gamblers, and problem gamblers – participants were recruited in different contexts, ranging from gambling settings such as bingo halls, slot machine game rooms, betting centres, and non-gambling settings such as the University and informal settings such as coffee shops, bars, and public gardens. In Malta, considering the small size of the territory, data collection involved people from different areas of the country, whereas in Italy, it was conducted in a city in the South-East (Lecce). The original Italian group was wider than the actual number of participants considered in this study but – to enable a better comparison – Italian participants were selected to balance the two country groups by gender, age and levels of involvement in gambling. The later has been defined according to the cut-off of *Problem Gambling Severity Index* (PGSI) (Ferris & Wynne, 2001) (see instrument section, paragraph 3.2). The socio-demographic characteristics of the sample, levels of engagement in gambling, disaggregated for the two countries, are shown in Table 1.

Table 1. Socio-demographic characteristics of survey respondents

Variables		Country			Chi-square	*p*-value
		Malta (n=67)	Italy (n=67)	Total (N=134)		
Gender	Male	31	37	68	1.075	.300
	Female	36	30	66		
Age	16 – 27	18	15	33		
	28 – 39	11	12	23		
	40 – 50	20	13	33	11.631	.020
	51 – 62	8	23	31		
	63 +	10	4	14		
Levels of involvement in gambling (PGSI* score)	Non-problem	57	52	109		
	Low-risk	1	5	6	2.963	.397
	Moderate-risk	2	2	4		
	Problem gambling	7	8	15		

*PGSI=Problem Gambling Severity Index

3.2 *Instruments*

Self-reported questionnaires were used to detect cultural models, social support and problem gambling. The questionnaire *Interpretation of the Social Environment* (ISE) was used to detect participants' cultural models. The ISE is designed specifically to detect the

content of generalised affect-laden meanings embedded within a certain cultural milieu. To this purpose, ISE is based on a specific methodology of psycho-social matrix, developed by Carli and Salvatore (2001) and by Mossi and Salvatore (2011): the ISO methodology. According to this methodology, a culture can be interpreted (and represented) in terms of basic dimensions of sense; each dimension of sense can be represented in terms of the tension between two generalized/super-ordered meanings working as its opposing polarities. The method is aimed at singling out (dis)similarities in the subjects' positions on these dimensions of sense, that is, in their way of using meaning in order to connote relevant objects of experience. The items are designed to facilitate the expression of opinions/evaluations concerning the micro- and macro-social environment (e.g. assessments of the place where people live and of the reliability of social structures and institutions) and social identity (e.g. moral judgments on social behaviour, image of young people). Every combination of question/response choice is constructed to encourage generalised evaluations, rather than to prompt circumstantiated reasoning or knowledge. To this end, the items concern generic objects (e.g. "Italian people", "Italy"), which are more likely to work as a projective stimulus. A six-point bipolar adjective scale, without intermediate alternatives, forces a respondent's positioning towards opposite modes of response. Through the studies, ISE has proved to have good parameters of reliability with a Cronbach alpha of about 0.70. In the current study, a 17-item version of the questionnaire was used and drawn up on the basis of data provided by its previous usage.

The questionnaire for the *Evaluation of Social Support* (SS) (Grundy & Murphy, 2007) was used to measure individual perception of social support received. The instrument consists of seven statements (''There are people I know – amongst my family or friends – who: Do things to make me happy; Make me feel loved; Can be relied on no matter what happens; Would see that I am taken care of if I needed to be; Accept me just as I am; Make me feel an important part of their lives; Give me support and encouragement) with three response categories 1:''not true'', 2:''partly true'', and 3: ''certainly true''. The instrument has shown good parameters of reliability (α=0.87) (Poortinga, 2006). In this study the alpha value is 0.909.

The *Problem Gambling Severity Index* (PGSI) (Ferris & Wynne, 2001) consists of a 9-item scale used to measure the severity of gambling problems in the general population. The cut-offs used to assign gamblers are: 'non-problem gamblers' (PGSI=0), 'low-risk' (PGSI=1–2),'moderate-risk' (PGSI=3–7), or 'problem-gambler' (PGSI>7) on a scale ranging from 0 (never) to 3 (almost always). PGSI demonstrated a good internal consistency (α = .84) and an adequate test-retest reliability (r = .78) (*Ibid*). In this sample the alpha value is 0.966.

All participants were informed of the anonymity of responses and the voluntary nature of participation. Each participant signed an informed consent form. The administration was done individually and took about twenty minutes.

4.   *Data analysis*

4.1   *Detection of cultural models*

The responses of the sample to the ISE questionnaire were subjected to Multiple Correspondence Analysis (MCA, Lebart, Morineau, & Warwick, 1984), with the purpose of detecting patterns of response modalities that recur throughout the respondents. The purpose of MCA is to identify a small number of dimensions (factors) capable of explaining the

broadest part of the data matrix's inertia present among the category-variables analysed. Each factorial dimension describes the opposition between two patterns of co-occurring response modalities across respondents. We consider factors as the markers of an oppositional dimension, called Dimension of Sense (Mossi & Salvatore, 2011) – describing the dialectic between two opposite generalised meanings (such as trustworthy versus untrustworthy; familiar versus unfamiliar). In this study, the focus was on the first two factorial dimensions (henceforth: ISE1 and ISE2) extracted by MCA, as the ones explaining a large proportion of the data matrix's inertia. MCA provides a measure of the degree of association of any respondent with every factorial dimension, expressed in terms of the respondent's position (the coordinate) on the dimension. The cultural model that the respondent belongs to is detected in terms of two factorial coordinates – one for each factor/dimension of sense.

4.2 The analysis of the relationship between social support, cultural models and problem gambling in the two country groups

A Structural-Equation-Modelling (SEM) approach was used to test the hypothesis of a relationship between cultural dimensions, social support, and problem gambling. SEM constitutes a powerful statistical technique for testing relationships among variables (MacKinnon, Lockwood, Hoffman, West, & Sheets, 2002). An advantage of SEM over regression is that it provides an index of model adequacy by keeping the measurement error under control and this helps to solve multi-collinearity problems. It also allows for "third-variable" moderators, i.e. variables whose levels can modify the causal effect of an observed relationship (Baron & Kenny, 1986).

In the current study, measures of social support and cultural models, along with socio-demographic characteristics (gender, age), were inserted as exogenous variables and problem gambling was inserted as an endogenous variable. The multi-group SEM (Kline, 2005) was used to test moderating effects of the country variable (Malta/Italy), and thus to verify whether there are any effects that are significantly due to the moderator variable. The analyses were conducted using MPLUS (ver. 1.4, Muthén & Muthén, 2004).

5. Results

5.1 Cultural dimensions

The Benzécrì formula of inertia adjustment (Benzécri, 1973) was applied and it was observed that the first factorial dimension of the ISE (ISE 1) accounts for 20% of the inertia, and the second (ISE 2) for 32%; on the whole, these two dimensions explain 52% of the total inertia expressed. The most significant response modalities ISE are reported in Tables 2 and 3.

ISE 1. MODELS OF RELATIONSHIP WITH THE SOCIAL ENVIRONMENT: Family-focused (-) Vs Self-reliance (+): this dimension opposes two ways of evaluating one's own context of belonging (Table 2). On the negative polarity (*Family-focused)*, we can see that many items focus on the value of family (it is reliable and competent, and it is important to take care of it) together with other items that give value to rules, to work and to getting respect. At the same time, a strongly negative image of the surrounding environment (e.g. the inefficiency of the State, the incomprehensible nature of society, the lack of economic resources) and of the future (it generates concern and unpredictability) emerges from this polarity. So, the family appears to be the only reliable context within an environment

perceived as being highly critical and having poor prospects. It is worth noting that, in the name of family, personal endorsement of anomic criteria is accepted ("Sometimes I need to bend the rules to help people I care for": strongly agree).

Table 2. Response modes most significantly associated with the first factorial dimension (ISE 1) of the Interpretation of the Social Environment questionnaire

Test value*	Item	*Response*
Family-focused		
-6.83	Your family is: unreliable/reliable	Very reliable
-6.81	It is important: to work	Absolutely important
-6.67	Your family is: unable/able	Very able
-6.51	It is actually impossible to make predictions for the future	Strongly agree
-6.42	Country issues: Inefficiency of the State	Strongly agree
-6.41	What happens in society is not understandable	Strongly agree
-6.29	If you think about the future, you feel: worried/confident	Very worried
-5.95	It is important: to be respected by others	Absolutely important
-5.92	Country issues: lack of economic resources	Strongly agree
-5.91	Politicians are almost always dishonest	Strongly agree
-5.76	Sometimes I need to bend the rules to help people I care for	Strongly agree
-5.65	It is important: to study	Absolutely not important
-5.59	It is important: to follow the rules	Absolutely important
-5.53	I have no worries, because someone is taking care of my future	Strongly disagree
-5.41	Italian/Maltese people are: worried/confident	Very worried
Self-reliance		
5.19	It is important: to work	Very important
4.89	It is important: to take care of your family	Very important
4.67	Your friends are: unable/able	Quite unable
4.47	It is important: to study	Very important
4.45	It is important: to be respected by others	Quite important
4.29	Your family is: unreliable/reliable	Quite unreliable
4.28	Your friends are: unreliable/reliable	Quite unreliable
4.18	Italian/Maltese people are: interested in themselves and their family	Quite agree
4.14	I have no worries, because someone is taking care of my future	Quite in disagree
4.08	Italian/Maltese people are: practical/idealistic	Very practical
3.90	Italian/Maltese people are: desperate/calm	Very hopeless
3.69	Country issues: lack of skills	Very agree
3.63	Inhabitants are interested in themselves and their family	Quite agree
3.53	Do you feel you belong to your country?	Mildly yes
3.35	Italian/Maltese people are: passive/active	Quite active

*Coefficient of statistical association between an item and a factorial dimension. An association is significant if the absolute value is greater than 2

In the opposite polarity (*Self-reliance*), response modalities emphasising the importance of studying, working, being respected and caring for one's own family co-occur with modalities depicting the context of belonging as unreliable and untrustworthy. Fellow citizens are perceived here as being interested only in themselves; even family and friends do not seem to

be a source of security. Within this scenario, the commitment to studying and working appears to be the way of expressing the feeling that one can rely only on oneself.

Table 3. Response modes most significantly associated with the second factorial dimension (ISE 2) of the Interpretation of the Social Environment questionnaire

Test value*	Item	Response
Unreliability (-)		
-7.36	Your family is: unreliable/reliable	Very unreliable
-7.17	Your family is: unable/able	Very unable
-6.65	Your friends are: unable/able	Very unable
-6.56	Your friends are: unreliable/reliable	Very unreliable
-6.52	It is important: to study	Absolutely important
-6.19	Italian/Maltese people are: passive/active	Very active
-5.86	Your colleagues are: unable/able	Very unreliable
-5.24	Your colleagues are: unreliable/reliable	Quite unreliable
-4.97	Your friends are: unreliable/reliable	Quite unreliable
-4.69	Your friends are: unable/able	Quite unable
-4.28	It is actually impossible to make predictions for the future	Strongly disagree
-4.24	Italian/Maltese people are: skilful/unskilful	Quite unskilful
-4.12	People cannot change	Strongly disagree
-3.98	Do you feel you belong to your city?	Definitely no
-3.98	Your colleagues are: unreliable/reliable	Very unreliable
Reliability (+)		
5.71	Your friends are: unable/able	Quite able
5.44	It is important:t o study	Absolutely not important
4.91	Your family is: unable/able	Quite able
4.64	Your family is: unreliable/reliable	Very reliable
4.38	Your friends are: unreliable/reliable	Quite reliable
4.33	Your colleagues are: unable/able	Quite able
4.23	Your colleagues are: unreliable/reliable	Quite reliable
4.07	If you think about the future, you feel: passive/active	Quite active
3.98	If you think about the future, you feel: desperate/calm	Not very calm
3.97	Your family is: unreliable/reliable	Quite reliable
3.91	Italian/Maltese people are: desperate/calm	Not very desperate
3.75	Do you like to live in your city?	Moderately yes
3.40	Your colleagues are: unreliable/reliable	Not very reliable
3.37	Italian/Maltese people are: skilful/unskilful	Not very skilful
3.27	Your family is: unable/able	Very able

*Coefficient of statistical association between an item and a factorial dimension. An association is significant if the absolute value is greater than 2

ISE 2. EVALUATION OF THE CONTEXT OF BELONGING: Unreliability (-) Vs Reliability (+): this second dimension shows two different ways to symbolize belonging within one's context of life: responses focus on aspects like family, friends, colleagues and fellow citizens (Table 3). On the negative polarity (*Unreliability*), the micro-social context of belonging is perceived as being strongly unreliable, unable and uninfluential. In the opposite polarity (*Reliability*), positive connotations are aggregated. Family, friends, colleagues and fellow citizens seem to be quite reliable and efficient.

5.3   *The SEM results*

Our initial model included cultural models, social support, gender and age as exogenous variables, and gambling as an endogenous variable. This first hypothesis did not yield a good fit to the data for problem gambling. The gender variable was therefore excluded from the model. The model thus implemented was estimated to have a good fit (χ^2 = 74.661; df 10 p < .05; RMSEA = 0.196, CFI = 0.967, TLI = 0.889).

Subsequent analyses posited a moderating effect for country. As detailed above, a multi-group SEM was used for this purpose. Table 4 shows the significant decrease in χ^2 from the full-constrained model to a model in which one relationship is set free (χ^2 = 22.741 df 3 p. >.001). This difference χ^2 suggests that the moderator variable has a significant influence on the relationship with respect to the exogenous variables considered.

Table 4. Differences in χ^2 values of path coefficient invariance test

Moderator: country		χ^2	Df	p-value
Model 1	Full constrained model	27.497	5	0.0000
Model 2	Partial constrained model	4.756	2	0.0927

* p<.05.

Figures 1 and 2 show the relationships of the model with respect to the two groups split by country. One can note the respective differences and similarities in the scores and in the direction of relationships among the two cultural factors, social support measures, age and gambling problem scores.

A significant relationship occurs between age and problem gambling (PGSI scores), and between social support (SS scores) and problem gambling for both the Maltese group and the Italian group. In the case of age, the relationship is positive: the higher the age, the higher the likelihood of problem gambling. Regarding social support, the relationship is negative: the lower the perceived social support, the higher the PGSI scores.

Concerning cultural dimensions, a significant relationship between both the ISE factors and PGSI scores were found for both groups. However, the two country groups were shown to be different with regard to the direction of the relationship. In the Italian group there is a positive relationship between ISE1 (Models of relationship with the social environment) and PGSI scores, while in the Maltese group there is a negative relationship. This means that in the case of Italy, being self-reliant (the positive polarity), within an environment perceived as lacking rules and reliability, relates to greater engagement in gambling. On the other hand, in the case of Maltese respondents, it is a family-oriented way of interpreting one's relationship with the social environment (the negative polarity) that is associated with problem gambling. Regarding the second cultural dimension, in the Italian group there is a negative relationship between ISE2 (Evaluation the context of belonging) and PGSI scores, while in the Maltese group this relationship is positive. This means that problem gambling relates to a view of the context of belonging as being unreliable (negative polarity of ISE2) among Italian people.

Conversely, problem gambling relates to a trusting view of one's life context (positive polarity of ISE2) among Maltese people.
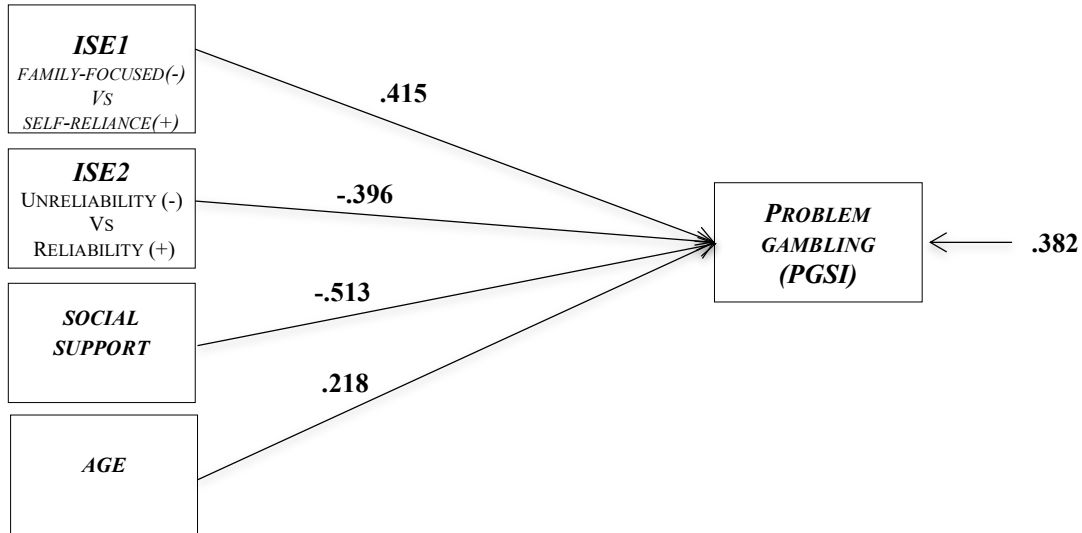

Figure 1. Moderation role of country-Malta: standardized parameter estimates (std. err) between Interpretation of the Social Environment (ISE1 and ISE2), Social Support (SS), Age and Problem Gambling Severity Index (PGSI) outcomes. Only significant paths are displayed
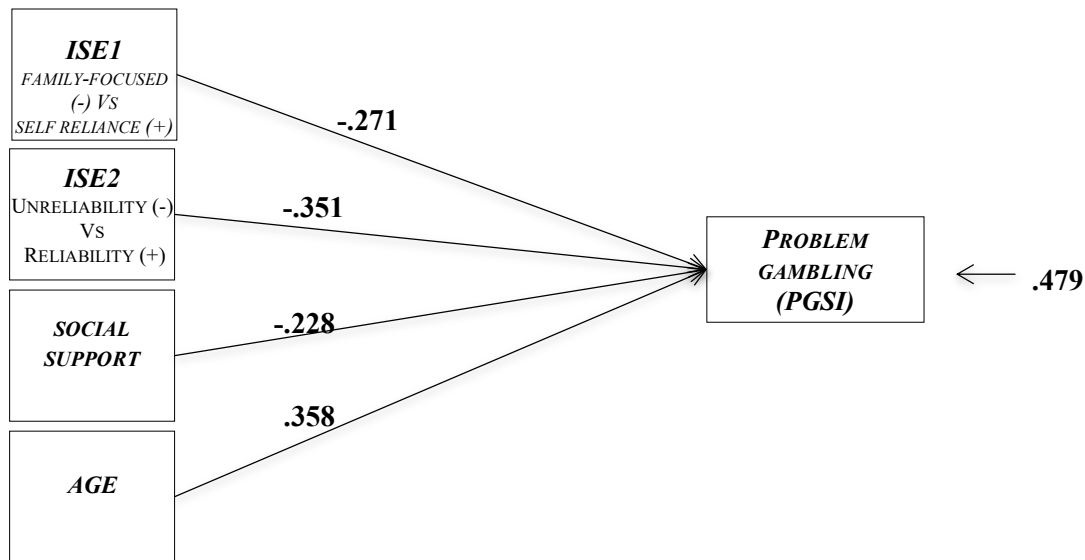

Figure 2. Moderation role of country-Italy: standardized parameter estimates (std. err) between Interpretation of the Social Environment (ISE1 and ISE2), Social Support (SS), Age and Problem Gambling Severity Index (PGSI) outcomes. Only significant paths are displayed

6.   Discussion

We contend that a deeper analysis of people's socio-cultural milieu can offer a better understanding of the development of problem gambling.

Our findings show that, as expected: a) the lower the perceived social support, the higher the probability of problem gambling, in both the Malta and Italy groups (*hypothesis 1*); different cultural models are associated with different probabilities of problem gambling (*hypothesis 2*); the content of the relationship between cultural models and problem gambling differ in the two different countries (*hypothesis 3*).

The results about the relationship between perceived social support and probability of problem gambling are consistent with what emerges from both qualitative and quantitative research on hazardous behaviours, health-related lifestyles and course of illness (Borrell & Boulet, 2005). Scholars have suggested that social support might reveal its beneficial effect on health and emotions in times of distress, as it buffers the negative impact of stressful events. A lack of social support was found to increase the motivation to use alternative coping strategies including gambling, while good support can buffer stress and support decisions to reduce or abstain from gambling (Petry & Weiss, 2009).

Our study suggests that the perceived social support combines with the ways people interpret their social environment in supporting different approaches to gambling. Our method does not allow us to make inferences on the relationship between these two dimensions. On the one hand, perceived social support is likely to be a function of the general view people have of their context of belonging (e.g. people who feeling that the context is unreliable are likely to view the people around them as unreliable and thus to perceive low social support compared to people seeing it as reliable). On the other hand, the degree of perceived social support may influence the kind of evaluation made of the wider social environment. Probably, the best approach is to consider the relation between social support and cultural models in terms of circular causality.

As regards the cultural models, we found that problem gambling among the Italy and Malta groups is associated with different ways of interpreting one's RELATIONSHIP WITH THE MICRO SOCIAL ENVIRONMENT (ISE1) and ways of evaluating it [EVALUATION OF THE SOCIAL ENVIRONMENT (ISE2)]. Consistent with previous studies on the Italian context (Venuleo *et al.*, 2016; Venuleo, Mossi, & Calogiuri, 2018), problem gambling in the Italian group appears to be related to self-reliance and a devaluation of the context one belongs to, which is seen as acting as a source of malaise and negative feeling. It is useful to point out that over the last thirty years, Italy has seen rising levels of substantial income inequality, which increased with the economic crisis, together with an increasing distrust toward politics and institutions. We may presume that within the anomic scenario, where the feeling is of living in a world where nobody cares about rules and where social resources to improve one's condition appear to be absent, gambling may acquire the meaning as a way in which the idea that "one can rely on oneself" is expressed and enacted.

In the case of the Maltese, problem gambling appears to be fuelled by a trusting attitude toward one's micro-and macro-social context, rather than social retreat or disaffection. This result is not obvious, but it is at any rate plausible. Two key aspects of the Maltese context appear useful in interpreting this finding. Firstly, one can see that gambling (especially online gambling) in Malta tends to be regarded and promoted as an economic matter more than a potential health problem. The lack of empirical studies about gambling and/or problem gambling in the country (Griffiths, 2010) might be understood, at least in part, as a reflection of this view. Second, one has to consider that Malta is among the jurisdictions with a high number of gambling websites and volume of online transactions (Bonello & Griffiths, 2017;

Williams, Wood & Parke, 2012; Wood & Williams, 2007). It has been argued that this state of affairs is due to the policies of neoliberal export-oriented competitiveness of favourable tax jurisdictions (Myllymaa, 2017). This can play an important role in explaining the emergence and the development of the online gambling market.

Gambling websites tend to emphasize the social and economic advantages of online gambling and to lack prevention strategies (Khazaal et al., 2013). In their analysis of advertising, new media and the contents of online gambling promotion, McMullan and Kervin (2012) note that the websites created friendly places where "the urge to step into cyberspace led inexorably to a form of electronic friendship that was novel and adventurous yet familiar and reassuring" (p. 629). The underlying message appears to suggest that online gambling is a useful opportunity to foster the need to test one's skill and endurance, to have fun, and to obtain all these outcomes in the familiar context of home or work (see McMullan & Kervin, 2012). In short, a trusting, familiar view of the gambling setting is promoted. We might suppose that this view of gambling also works as a cultural barrier to the implementation of measures (e.g. adverts on risks related to problem gambling) which may have protective effects against the development of problem gambling. However, this is a suggestion that needs to be explored and empirically developed in future studies.

Finally, it should be noticed that in the current study, older people were found to be more likely to develop problem gambling in both country groups. The role of age is consistent with the literature, where age was found to have a significant relationship with problem gambling (e.g. Volberg et al., 2010). However, discordant results emerged in the present study with regard to the direction of this relationship. Whereas previous reviews and studies indicated a general decline in gambling behaviour with age (Bastiani et al., 2013; Subramanian, 2015; Volberg et al., 2010), our results – based on Maltese and Italian participants – show that problem gambling increases in the later years of life. The number of participants - of older people, who are underrepresented, make it difficult to make inferences about their specific characteristics. This is a limitation and that this matter has to be further explored. We may only suggest that contextual factors could play a role in mediating the relationship between age and problem gambling. For instance, it is suggested that changes associated with old age, such as retirement and the loss of friends and spouses, may reduce the number of roles that the elderly can play, and that they could turn to gambling to replace their lost role (Dowling et al., 2017). Social and community factors, such as the opportunities for social exchange available in one's community, the quality of social networks and welfare state regimes, could mediate this relationship (Warburton & Jeppsson Grassman, 2011; Di Gessa & Grundy, 2014).

7.   Conclusion

Bacchi (2009) points out that how a problem is understood, even implicitly, has flow-on effects on how policies are envisaged. Findings from the present study offer support to the idea that people's involvement with unhealthy behaviours, like problem gambling, are socially and cultural informed. The level of perceived social support and the way people interpret their social environment were found to play a significant role in explaining problem gambling in the two groups examined – Maltese and Italians. As regards the implications for policies, two main aspects can be highlighted. First, a culture-based approach to psychological health and well-being might be effective in preventing problem gambling. Prevention strategies must expand to target the general cultural frame orienting people's social experience, and not only their specific beliefs and attitudes toward gambling.

Secondly, our standpoint maintains that these meanings are the outcome of intersubjective negotiations within people's life worlds. Therefore both the government and the social network (family, peers, neighbourhood, etc.) are responsible for reflecting on the ways in which they fuel or constrain an individual's cultural model, making it more or less favourable terrain to gambling (Reith, 2007). They "are part of" the very culture that we need to examine. From this perspective, recognizing the role of socio-cultural determinants helps us understand how productive it might be to recognize the familiar life-worlds of people in their communities as legitimate sites of intervention (Andrisano Ruggieri et al., 2016; Borrell & Boulet, 2005).

Consistently with a defining aspect of community action research, we emphasize the need to address health issues where they are situated, taking into account local cultural variation and particularities. Effective community health interventions require consideration of social and cultural constructions of the people involved (Israel, Eng, Schultz, & Parker, 2005; Schensul & Trickett, 2009).

There are a number of limitations in the current study. Firstly, given the convenient nature of the sample, the results have to be related to the specific cultural context under analysis. As the comparison between the Italian and Maltese groups suggest, different cultural components may act as a risk or protective factor in other countries. Secondly, we proposed the interpretation of cultural models and perceived social support as factors of vulnerability towards problem gambling. Future work to clarify the nature of this interaction is warranted. Thirdly, the comparison between Maltese and South-Eastern Italian groups– and, more widely, cross-national approaches – could be improved by considering other potential structural determinants of people's health, such as income inequality or health expenditure, which previous studies have found to be associated with probable gambling in European countries (Canale et al., 2017). However, they may be either risk factors for hazardous gambling or an effect, but there may also have been a bidirectional relationship. Finally, given the continuing evolution of the gambling scenarios, the widespread availability of online gambling and the differences which may be found between gambling and online gambling in terms of gamblers' characteristics and cultural models, future studies should adopt research designs and instruments that allow for the evaluation of (dis)similarities in the determinants of off-line and online gambling.

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