

M&SH Questionnaire – a simple method of measuring mental and social health from the perspective of public health prevention

Authors' Contribution:

- ✍ A Study Design
- 📁 B Data Collection
- 📊 C Statistical Analysis
- 📄 D Manuscript Preparation
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Abstract

Background & Study Aim:

The necessity to estimate mental health and social health, even in the simplest way, is not questioned. Both phenomena belong to the key elements of the widely and narrowly understood public health. The aim of this paper is recommendation the M&SH Questionnaire as a simple tool (method) used to measure mental and social health in order to verify the Profile of Sense of Positive Health and Survival Abilities that was in advance determined based on declaration of a single respondent.

Material & Methods:

The prototypes of the M&SH Questionnaires are based on verbal simulations tools for assessment of the phenomena involving particular human actions performed under difficult and extreme conditions. Verification of validity of the accepted concept involving mental health and social health measurements using simulation methods, as well as verification of each indicator, was based on the assessment of five independent experts in pedagogy, psychology and health science (2 professors and 3 PhDs). All these competent judges have many years' experience in scientific exploration based on simulation methods and pedagogical practice involving preparation of a person for actions under difficult and extreme situations.

Results:

The M&SH Questionnaire consists of 12 statements (or questions) informing about hypothetical situations with the respondent participation. The result of each respondent's declaration is based on five-point scale (conventional points, which simplifies statistical analysis): 5 (declared answer indicates a very high level of mental and/or social development); 1 (the opposite of such a conclusion); 4, 3, 2 remain in the middle.

Conclusions:

The authors recommend using M&SH Questionnaire as a simple tool of estimating mental health and social health based on the described simulated situations, which meet the required validity standards of empirical study methodology. The validity of using this questionnaire will be finally determined based on the results of independent (of the authors) verification of this research tool reliability and the results of research using M&SH tests associated with different diagnostic, prophylactic and therapeutic effects.

Key words:

described simulated situations • KK'017 questionnaire • KK'98 questionnaire • mixed assessments • verbal simulations

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Mental health – *noun* the condition of someone's mind [37].

Social health – is defined as: how a person gets along with other people; a person's level of support from people and institutions around them; how well a society does at offering every citizen the equal opportunity to obtain access to the goods and services critical to being able to function as a contributing member of society. An example of social health: a) is the amount of interaction a person has with their community; b) for a society is laws and regulations being applied to all citizens equally; c) is public access to the decision-making processes; d) is when an individual feels the support offered by being a part of the society, causing him to feel the encouragement to better himself through personal growth such as increased education or the development of a talent [38].

Public health – *noun* the study of illness, health and disease in the community. è **community medicine** [37].

Health promotion is the process of enabling people to increase control over and to improve their health (...) Health promotion represents a comprehensive social and political process, it not only embraces actions directed at strengthening the skills and capabilities of individuals, but also action directed towards changing social, environmental and economic conditions so as to alleviate their impact on public and individual health. Health promotion is the process of enabling people to increase control over the **determinants of health** and thereby improve their **health**. Participation is essential to sustain health promotion action [39, p. 1-2].

DSM – Diagnostic and Statistical Manual of Mental Disorders [2].

Bravery – means efficiency in good deeds, efficiency combined with estimable aspirations [40].

Simulation – caused in model an event, which under some circumstances is similar to the event occurring in examined real object [40].

INTRODUCTION

The necessity to estimate mental health and social health, even in the simplest way, is not questioned. Both phenomena belong to the key elements of the widely and narrowly understood public health. They are controversial due to the different opinions concerning the indicators on which evaluation should be based. Therefore, we have decided not to present even the most general review of scientific literature dedicated to the aforementioned phenomena. In our opinion, it is sufficient to study the three important papers written between 2015 and 2016 [1-3]. Hoff [1], by Shorter [2] and Surís et al. [3] as they provide science-based argumentation, raising awareness of the dimensions of methodological dilemmas concerning acceptance of mental health diagnostic criteria from the perspective of psychiatry and other medical sciences.

However, the legal medical perspective of mental health interpretation neither covers nor limits the possibilities of studying this phenomenon by researchers dealing with other branches of knowledge such as pedagogy, sociology, health sciences including sport science, etc., especially as far as social health is concerned. Moreover, solving numerous problems pertaining to public health, health promotion and prevention (apart from the issues related to economics, marketing, social policy, etc.) goes beyond the competence of specialists in medical sciences. It is enough to mention the role of teaching swimming which, apart from utilitarian values, is an important approach to treatment and rehabilitation. The issues related to diagnosis and reduction of aggressiveness and anxiety are closer to health promotion and prevention than public health issues. There are more empirical arguments for reduction of aggressiveness using specific strategies and non-pharmacological treatment by competent didacticians [4-7]. It is not paradoxical that a properly selected physical activity, not necessarily based on rivalry (especially the increasingly popular survival forms) and certainly some activities such as games, combat sports and fun forms of martial arts, are easily accessible and simple tools for diagnosing aggression and anxiety [respecting the year of publication: 8, 4, 9, 5-7].

The question whether these scientific achievements will cross (not only symbolically) the Atlantic, the nonexistent yet still effective Iron Curtain [10, 11] and if so, when it is going to happen (the dilemma similar to DSM) [2]) is still open.

Thirty years after the fall of the Berlin Wall, we cannot find in Anglo-Saxon scientific papers any publications dedicated to bravery (see glossary) as a favorable effect of the innovative application of combat sports and fun forms of martial arts. Conversely, it is quite easy to find evidence and even a directly articulated puzzlement of some intellectuals that the contemporary people, being part of the society dominated by the Internet, lack motivation and patience to participate in psychological surveys that are time-consuming and require concentration.

In our opinion, these phenomena are important barriers blocking the cognitive sphere of the human being. If in the countries with the highest Gross Enrolment Ratio (GER) or Gross Enrolment Index (GEI) there are alarming reports highlighting the problems with reading comprehension even in case of simple texts, it is virtually impossible to widely use even some part of the recommended personality tests, especially those involving complex assessment of every man's mental health. The BD-100 test, popular since the fifties of the nineteenth century, measuring aggression based on the respondent's answers to 100 questions, is a good example [12]. Aggressiveness is only one (yet very important) index of mental health.

The aim of this paper is recommendation the M&SH Questionnaire as a simple tool (method) used to measure mental and social health in order to verify the Profile of Sense of Positive Health and Survival Abilities [13, 14] that was in advance determined based on declaration of a single respondent.

MATERIAL AND METHODS

Three main sources of inspiration

Firstly, the role of the M&SH Questionnaire clearly determines the goal of this paper. The tailored (Kalina) SPHSA questionnaire, published in 2012, predicts first the definition of positive health profile in three dimensions (somatic A, mental B and social C) and survival ability (dimension D), based on subjective respondents' declarations and next – empirical verification of the obtained indicators [13].

Secondly, in the period 2012-2016 scientists analysed profiles of sense of positive health and survival abilities declared by 741 adults who

were occasionally active and 141 adults who were active every day [14]. It was not found that physical activity differentiated the declared profiles of individual homogeneous groups due to professional qualifications.

Thirdly, the first researcher who empirically verified the somatic dimension of self-rated positive health declared by adult men ($n = 9$) and women ($n = 15$) is Dawid Dobosz [15, 16]. His discoveries, apart from the evident cognitive values, provide evidence-based argumentation that courage is as important in science as methodological toolkit, solid educational foundation, precise language and respecting the standards of ethics and good manners. Dobosz studied a very small sample of adult population, he has shown, however, that SPHSA questionnaire is a very sensitive research tool, meeting the expectations concerning differentiation of results. He has found that compliance of profiles of the declared somatic health indicators and indicators verified based on recommended tests [17] is low (women 33%; man 11.1%). He overestimated health status of 67% men and 47% women and underestimated it in 22% men and 20% women. Therefore, the thesis that the expected sensitivity of SPHSA questionnaire also concerns the remaining dimensions, namely B, C and D, is justifiable. The proportions of compliance, overestimates, underestimate are unknown, therefore the hypothesis claiming the similarity of the distribution of these proportions, based on A dimension or any concurrent hypothesis require empirical verification in the future.

Other premises and theses

The above-mentioned empirical verification of B and C dimensions is expected to enable our tailored M&SH Questionnaire while the kit of tools and indices dedicated to dimensions A and D (survival abilities) to be applied in assessment of adult people profiles using SPHSA was published earlier [17].

The prototypes of the M&SH Questionnaires are based on verbal simulations tools for assessment of the phenomena involving particular human actions performed under difficult and extreme conditions [18, 19]. They were initiated by Kalina [4] based on the idea that the declared human actions performed under various simulated conditions of interpersonal aggression can be the adequate indices of self-defense instinct. Referring to the respondent's

consciousness of being quite sure that the goal of physical assault is to deprive him/her of life is an example of such simulation. Alternative simulations include attacks on incidental people or on a person being close to the respondent, or physical assault with an unprecise goal, etc. It is difficult to attribute the value of the developed self-defense instinct to a person declaring that escalated aggressiveness is a proper response to aggressiveness. It is easier to attribute the opposite to such a person, namely an inclination to interpersonal aggressiveness or increased aggressiveness (the questionnaire included 7 statements or questions and the majority of them concerned interpersonal aggression simulation). People who often declare behavior corresponding to noble fight which should consider respecting basic norms of ethics, provide evidence for a developed self-defense instinct.

KK'98 questionnaire developed by Kalina and Kałużny (based on 12 statements/diagnostic questions including 4 concerning simulated interpersonal aggressiveness) was used in studies for PhD Thesis by Kałużny [20], involving responses to 3 simulated interpersonal aggression situations, reacting to drowning accidents in the respondent's presence and non-defined circumstances when a person under threat counts on somebody's help. We emphasize that, according to praxeology criteria, „refraining from action is also action” [21]. Therefore, referring to each diagnostic thesis of the KK'98 questionnaire we may conclude that this criterion is met by one of the five alternative declarations (answer to the question).

The important criteria of the KK'98 questionnaire modification for KK'017 version include: extension to 6 simulated circumstances of interpersonal aggressiveness; decomposition of the 5-grade assessment scale (0, 1, 2, 3, 4) to a 4-grade scale (0, 1, 2, 3), based on mixed criteria of (praxeological and ethical) assessment – mixed assessments [22].

Separation of mental health (dimension B) and social health (dimension C) indicators is based on two simple theses. Firstly, each situation a person deals with or may deal with, requires selection considering the main criteria of value [23-25]. Secondly, if so, this person should undertake actions adequate to the circumstances to solve the problem in an optimal way, without hurting

Gross Enrolment Ratio (GER) or Gross Enrolment Index (GEI) – is a statistical measure used in the education sector, and formerly by the UN in its Education Index, to determine the number of students enrolled in school at several different grade levels (like elementary, middle school and high school), and use it to show the ratio of the number of students who live in that country to those who qualify for the particular grade level. The United Nations Educational, Scientific and Cultural Organization (UNESCO), describes “Gross Enrolment Ratio” as the total enrolment within a country “in a specific level of education, regardless of age, expressed as a percentage of the population in the official age group corresponding to this level of education” [Official UN definition for GER].

Praxiology (praxeology) – science about good work. *A Treatise on Good Work*, a fundamental lecture of praxiology by T. Kotarbinski (the first edition in 1955) has been translated into majority of the so-called congress languages (English, German, Russian) and as well: Czech, Japanese, and Serbo-Croatian [41].

The Delphi method (Delphi technique) – a method of group decision-making and forecasting that involves successively collating the judgments of experts [42].

anyone. In our opinion, these theses are closest to every conception of mental health and the criteria of detailed indicators may be based on them according to the accepted goal of the study. Arbitrarily, we assume that the clearest situations of this category include interpersonal aggression, other circumstances generating the feeling of anxiety or other types of stress as well as tolerance of the range of actions performed by other people, being in accordance with social norms.

Since the borderline between mental health and social health is difficult to determine, we have accepted the opinion that social health indicators should refer to basic interpersonal relations. The three indicators which are, in our opinion, of sufficient diagnostic value, used in the SPHSA questionnaire include: respecting „fair play” rule; respecting supreme values; responsibility [13].

Therefore, the simplest way of simulation of the two situational categories (dedicated to dimensions B and C) is brief description of each of them and presentation of five alternative actions each time. The detailed indicators of mental health (e.g. tolerance) and social health (eg respecting „fair play” rule) are based on these five possible behaviors, providing alternative responses to the circumstances when the respondent virtually functions. The arithmetic mean of these indicators (each of them is evaluated in 1-5 point scale) is the conventional assessment of mental health or social health levels respectively.

Delphi method

Verification of validity of the accepted concept involving mental health and social health measurements using simulation methods, as well as verification of each indicator, was based on the assessment of five independent experts in pedagogy, psychology and health science (2 professors and 3 PhDs). All these competent judges have many years' experience in scientific exploration based on simulation methods and pedagogical practice involving preparation of a person for actions under difficult and extreme situations.

The experts (competent judges) accepted without comments the vast majority of the proposed simulated situation descriptions and the accepted evaluation criteria (in 1 to 5 point scale). Due to the discrepancies in their evaluations, we have corrected three diagnostic statements of M&SH Questionnaire. Two of them are used to diagnose

respecting supreme values (simulated situations described: *“In life situations I present facts to others: ...”*; *“When anyone needs support or help:...”*). One is used to diagnose responsibility (simulated situation described: *“regardless the circumstances:...”*). All of them belong to the group of detailed social health indicators used for diagnosing. Only after accepting the corrected content by all experts, we have included these statements in the final version of M&SH Questionnaire.

RESULTS

Structure and content the M&SH Questionnaire

The M&SH Questionnaire consists of 12 statements (or questions) informing about hypothetical situations with the respondent participation. The result of each respondent's declaration is based on five-point scale (conventional points, which simplifies statistical analysis): 5 (declared answer indicates a very high level of mental and/or social development); 1 (the opposite of such a conclusion); 4, 3, 2 remain in the middle.

Mental health (MH Index) is estimated based on six statements:

Aggressiveness Index – arithmetic mean of the result of 2 simulated situations described: *“If another person was physically assaulted in your presence, then: ...”*; *“When someone physically attacks me, it:...”*;

Tolerance Index – arithmetic mean of the result of 2 simulated situations described: *“On every important issue:...”*; *“In contentious issues regarding faith, value system, political views, education, etc:...”*;

Sense of fear – simulated situations described: *“In circumstances that require to spend the night alone in an unfriendly environment:...”*;

Stress coping skills – simulated situations described: *“In the most difficult situations (physical or economic threat, strong psychological pressure, etc.):...”*.

Social health (SH Index) based on:

Respecting “fair play” rules (FP Index of M&SH) – arithmetic mean of the result of 2 simulated

situations described: *“In order to achieve a relatively long- of M&SH term effect, you solve the conflict in a way:...”; “In sports fight with my participation:...”;*

Respecting supreme values (RSV Index of M&SH) – arithmetic mean of the result of 3 simulated situations described: **kindness** *“When anyone needs support or help:...”;* **truth** *“In life situations I present facts to others:...”;* **courage** *“Would you jump into the water to save the drowning man if you could swim?...”;*

Responsibility – simulated situations described: *“regardless the circumstances:...”.*

DISCUSSION

In our opinion, two methodological arguments support the M&SH Questionnaire. The first one involves slight intervention from the competent judges participating in validation procedure of the unique research tool completely based on descriptive (verbal) simulations of numerous situations which, indirectly, can provide evidence for moral potential of the studied participant. The second one involves the so far application of the M&SH Questionnaire, especially the KK'017 questionnaire [26].

Studies on reliability of the KK'017 questionnaire, independently conducted using the test-retest method are of note [27, 28]. The main creator of KK'017, its earlier versions and the M&SH Questionnaire did not participate in these studies. This way, the postulate to entrust the mission to possibly independent teams of experts was fulfilled. In this case, the independence is limited since Kalina carries out studies and publishes the results with researchers involved in this part of procedure involving KK'017 questionnaire validation. If we assume that reciprocal verification of this paper by the closest coworkers in the world of science, not excluding the leader, it is a desirable phenomenon, questioning the above mentioned circumstances, makes no sense. In numerous laboratories worldwide, unique research is conducted by sparse, narrowly specialized teams of scientists. The rule of reciprocal confidence, enriched with verification of the leader's results even by his students, only gains credibility. Finally, everyone who has a research tool to his/her disposal can carry out a secondary validation procedure.

Therefore, if Klimczak [28], conducting at the same time the test-retest” procedure with students of tourism and recreation, obtained the result similar to this reported earlier by Kałużny and Kondzior [27] in a sample of military cadets, the next verification of the KK'017 questionnaire is an open question. Only formal arrangements remain between the owners of this tool and the investigator or research team concerned.

As for the KK'017 questionnaire, our attention is focused on the particulars including, in a sense, standard information about the respondent (sex, age, profession, etc.), but also questions pertaining to sport-related activity, social activity and experience in solving difficult problems in micro scale. In our opinion, the unique form of this research tool and the perspective of application make us think of bolder and more reasonable implications. If the questionnaire measures two dimensions of human actions (and it is not important that, in fact, they concern virtual reality), namely a hypothetical effectiveness as related to respecting ethical norms, more information on the respondent's intellectual and spiritual activity will possibly provide more evaluation opportunities.

The crisis of the skill development, not only reading comprehension, but also formulation of simple verbal and written messages, as well as the decreasing interest in books published in a traditional form, are the phenomena noticed in many countries that are regarded as developed countries in terms of technology. Conversely, one of the features of technology progress is expansion of music in public space. The lack of reliable reports on research conducted in large samples of population, concerning the effect of music on mental and social health, provokes a postulate to extend the next modification of KK'017 questionnaire by including questions pertaining to the respondents' music preference and experience.

The above mentioned postulate is only seemingly unrelated to the main goal of this study, involving formulation of recommendations dedicated to the M&SH Questionnaire. The KK'017 and M&SH Questionnaire are not the tools suitable for clinical studies. However, both of them are characterized by other values such as simplicity and applicability, and therefore, can be used by specialists in prophylaxis and therapy whose professions do not require psychologist

or psychiatrist skills (physical activity pedagogists, bibliotherapists, music therapists and specialists in art therapy). It is rather obvious that, based only on twelve simulated using description similar circumstances (this is characteristic of both questionnaires although they differ in the criteria and distribution of assessment results) that almost every person may experience, it is impossible to make a precise diagnosis, neither of the mental health of an individual, nor of social health which is difficult to quantify. The strength of the M&SH Questionnaire is the five-point grading scale adapted for the methodological criteria of SPHSA questionnaire. Comparison of the declared SPHSA (dimensions B and C) profile with the diagnosed profile is a simple task. This is the argument for using SPHSA questionnaire [13].

If the hypothesis that the proportions of compliance, overestimates, underestimate dimensions B and C are similar according to A-dimension pattern turns out to be true, the M&SH Questionnaire will be ranked as an adequate tool for mental health and social health screening. In the case of people with disproportions of the diagnosed profiles that clearly differ from the declared profiles, professional clinical diagnosis should be initiated. Each extreme overestimation or underestimation of each health dimension or survival ability self-assessment can bring immeasurable adverse consequences in the near or more distant future of a human being. Understanding missions of modern specialists in prophylaxis and or health therapists in all dimensions, without disregarding survival ability, provides an opportunity of appreciating innovative

agonology, the branch still awaiting global promotion [7, 11, 29-32]. This deeply esoteric science involves diagnosing the above phenomena based on SPHSA questionnaire [13] and the most often recommended non-apparatus and quasi apparatus tools [6, 14, 17, 33-36].

In the Introduction we expressed the opinion that "(...) our intention was not to report even the most general review of scientific literature" dedicated to the phenomena described in this paper. In our opinion, it is sufficient to study three important papers [1-3]. Obviously, we meant the necessity of estimating mental health and social health. Such a review was not necessary in this paper. However, a researcher (or a team of researchers) interested in diagnosing the full SPHSA profile should not ignore such a methodological procedure. Moreover, validation of M&SH Questionnaire reliability using test-retest method should be the initial methodological procedure.

CONCLUSIONS

We recommend using M&SH Questionnaire as a simple tool of estimating mental health and social health based on the described simulated situations, which meet the required validity standards of empirical study methodology. The validity of using this questionnaire will be finally determined based on the results of independent (of the authors) verification of this research tool reliability and the results of research using M&SH tests associated with different diagnostic, prophylactic and therapeutic effects.

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