

# Systematic review of health promotion policies or regulations with CCAT theory

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## Abstract

One of the five Ottawa Charter's means of action is the concept of "healthy public policy," which is an approach to health promotion that is integrated with public policy. This concept can be used as an approach/method in solving health problems at the broader policy level and involving all sectors comprehensively, not just health promotion at the community level and the partial health sector, so that public health problems can be resolved properly. We conducted a systematic review of health promotion policies or regulations using CCAT theory. The purpose of this study is to find the state of the art of research related to stakeholder synergy in online game addiction prevention policies in adolescents. References and literature for this systematic review were collected from the Proquest, ScienceDirect, Pubmed, and Google Scholar databases. The search uses the boolean phrases "OR" and "AND." Keywords: policy or regulation, health promotion, and community coalition action theory. The results of the systematic review conducted by the researchers showed that of the twenty selected articles, three articles used the coalition/partnership dimension from the CCAT theory, four articles used the stakeholder dimension, two articles used the collaboration dimension, five articles discussed school health policies, policies related to gaming disorders. One article on the analysis of the juvenile contraceptive law, one article on the prevention of mental health disorders, one article on health promotion interventions, and two articles on risk factors and self-regulation focus on online gaming addiction in adolescents. This study concludes that in the future, further research is needed regarding health promotion policies to prevent online game addiction in adolescents to develop specific policy recommendations related to preventing online game addiction in adolescents.

## Keywords

Policy, regulation, health promotion, community coalition action theory, good health, and wellbeing

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## Introduction

The essence of the definition of health promotion, both from the Ottawa Charter and its modification from WHO, is that people engage in behaviors that benefit health, both in the form of prevention and health maintenance behaviors. Organizational theory provides insight into how facilitating the adoption or institutionalization of certain evidence-based interventions within an organization can into positive health behaviors and prevention. This theory is rarely used in health promotion or public health programs such as a social psychological theory which is easier to use individual behavior change. Despite the program's focus on changing individual behavior explained by psychological theory, organizational theory remains relevant. The Community Coalition Action Theory was developed and

developed from the IOR theory of partnership building by Butterfoss and Kegler.<sup>1</sup> Two of them focus on community building and community development, while the other focuses on the development and structure of collaborative organizational relationships within the community. Membership of community coalitions varies in size and

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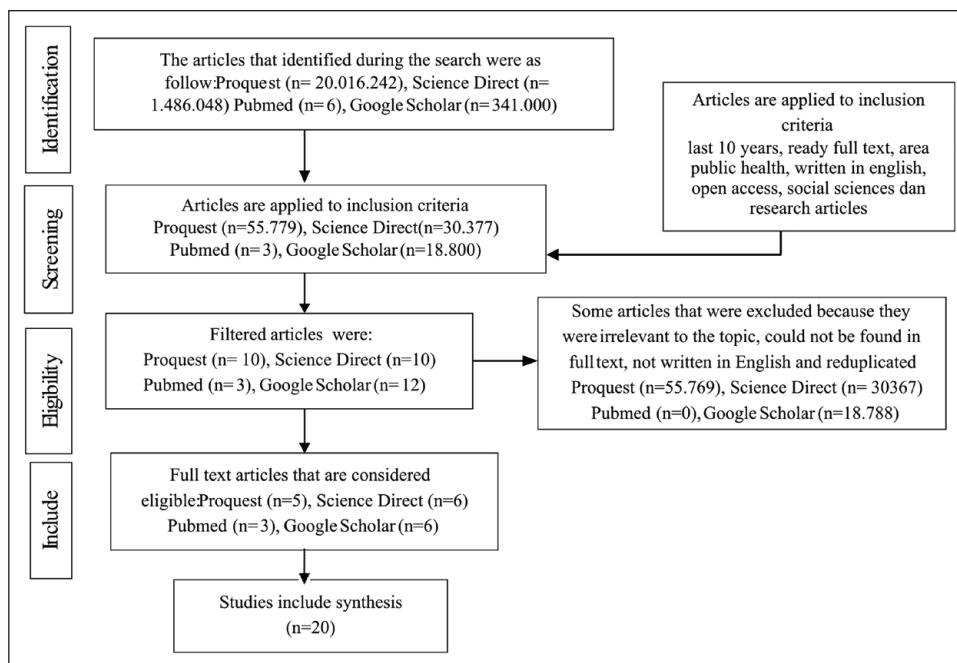
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**Figure 1.** PRISMA flow chart diagram of the process of identifying and including studies.

variety of professional and grassroots organizations as well as individual members. Employment relationships and role expectations range from formal (e.g. making rules and contractual relationships) to informal (e.g. using employment agreements) and can change over time. Coalitions can promote health agendas or issues, prevent disease, or improve societal problems by analyzing issues or problems, assessing needs and assets, developing action plans, implementing strategies, achieving community-level results, and creating social change. The CCAT is used to identify internal coalition factors and processes that lead to strategy implementation and community change.<sup>2</sup>

One of the five Ottawa Charter action tools is the concept of healthy public policy which is a health promotion approach that integrates with public policy. Learning from addiction problems that have long existed, such as tobacco, alcohol, drugs, unhealthy food and gambling, collaboration from various stakeholders and organizations is needed to develop effective policy and program responses to address health problems such as video games (including online games). This commodity has a serious impact on adolescents.<sup>3</sup> The purpose of this study was to find state of the art research related to stakeholder synergy in policies to prevent online game addiction in adolescents. This study discusses in detail about health promotion policies or regulations as a form of intervention on a problem from articles in various countries that use the Community Coalition Action Theory (CCAT) organizational change theory.

## Materials and methods

### Search strategy and selection criteria

References and literature were collected from the Proquest, ScienceDirect, Pubmed, and Google Scholar databases with the range of published articles between 2012 and 2022 (the last 10 years). Searches are in titles, abstracts, or keywords, even though the main topic is about online game addiction prevention policies in adolescents, search keywords are not included because there is still very limited research on this topic. So that in the end the search for articles focused on health promotion policies with analysis using CCAT theory, but also selected articles related to policy recommendations for online games, related to mental health related to online game addiction in adolescents and related to self-regulation in online game addicts as additional information and knowledge regarding policies that can be made for health promotion policies to prevent online game addiction. Keywords Policy OR Regulation AND Health Promotion AND Community Coalition Action Theory.

Inclusion criteria in the literature study are: (1) public health area; (2) All types of articles (3) articles in English; (4) articles are available in full text. Exclusion criteria (1) Articles are not in English, (2) Full text is not available, (3) Topics are not relevant to PICO. A total of 20 articles was identified for this article (Figure 1).

**Table 1.** General characteristic of selected studies ( $n=20$ ).

| Category  | <i>n</i>    | %    |
|---|-------------|------|
| Publish year                                    |             | -    |
| 2012  | -           | -    |
| 2013  | -           | -    |
| 2014  | -           | -    |
| 2015  | -           | -    |
| 2016  | 1           | 5    |
| 2017  | 2           | 10   |
| 2018  | 2           | 10   |
| 2019  | 4           | 20   |
| 2020  | 5           | 25   |
| 2021  | 3           | 15   |
| 2022  | 3           | 15   |
| Total   | 20 Articles | 100% |
| Research location (country)                     |             |      |
| Indonesia                                       | 1           | 5    |
| England   | 3           | 15   |
| Uganda and Kenya                                | 1           | 5    |
| Norwegia  | 1           | 5    |
| Saudi Arabia                                    | 1           | 5    |
| Iran  | 1           | 5    |
| European Country (Belanda, Denmark and Rumania) | 1           | 5    |
| Nigeria   | 1           | 5    |
| India   | 1           | 5    |
| Istanbul  | 1           | 5    |
| Korea   | 1           | 5    |
| Uruguay   | 2           | 10   |
| Chicago   | 1           | 5    |
| USA   | 2           | 10   |
| Hungary   | 1           | 5    |
| Jerman  | 1           | 5    |
| Total   | 20 Articles | 100% |

### Inter-reviewer agreement

Articles from the identified studies were reviewed and selected (excluded) with the assistance of Mendeley by three readers (EP, IN, and MZ). Articles that do not match the keywords are excluded (Topics are not relevant to PICO).

### Quality store assessment

The methodological quality of each evaluation study as described above, namely with the help of Mendeley, articles that do not match keywords will be excluded. Selection of articles inclusion is assisted by boolean phrases “OR” and “AND,” features in the body of the journal such as article year range, English, full text available.

### Data extraction and analysis

The data extracted from the selected studies included the name of the first author, country, year of publication,

sample, research methods and research instruments and research outcomes. Twenty articles were obtained by double selection based on inclusion and exclusion criteria. As previously explained, articles from studies that were identified by applying the inclusion criteria in the database were then reviewed and selected (excluded) with the help of Mendeley where articles that did not match the keywords would be excluded (Topics are not relevant to PICO). To build a state of the art without missing important information from various databases, articles were selected with various designs, both quantitative, qualitative, literature reviews and systematic reviews.

## Results

The results of a systematic review of stakeholder synergy in health promotion policies to prevent online game addiction in adolescents are the most published in 2021 (Table 1), namely 25%. The country of origin of the most selected articles was from England at 15%, from Uruguay at 10% and Hungary at 10%.

Of the twenty selected articles (Table 2), three articles use the Coalition/partnership dimension of the CCAT theory.<sup>4-6</sup> Four articles use the stakeholder dimension<sup>7-10</sup> Two articles use the collaborative dimension.<sup>11,12</sup> Five articles discuss school health policy, prevention and regulation of internet game disorder, public policy evaluation and literature review of video game addiction policy responses, policymaking interventions and policy strategies for substance abuse in adolescents.<sup>13-17</sup> One article on the analysis of the Juvenile Contraception Law,<sup>18</sup> one article on the literature review on the prevention of mental health disorders.<sup>19</sup> One article systematically reviewed health promotion interventions.<sup>20</sup> Two articles on risk factor dimensions and self-regulation focus on online gaming addiction.<sup>21,22</sup>

The development of youth health promotion media is the responsibility of various stakeholders who have programs targeting youth groups. Adolescent health is a comprehensive health degree from physical, mental, social, economic, and spiritual. Therefore, it is not only the health sector that is responsible, but all sectors from all walks of life (decision makers, providers, users, and representatives). Efforts to synergize through optimizing roles is one of the successful strategies in developing youth health promotion media.<sup>7</sup> An innovative intervention design has been developed in three European countries for public health policymaking, focusing on collaboration within policy-making networks.<sup>16</sup> Lillefjell and Mass research, 2022 examines multi-sector involvement and collaboration in implementing health promotion principles at the local level.<sup>11</sup> The level of participation and support of Hepatitis C policy-making in Iran was investigated, the conclusion of the study indicated that involvement in Hepatitis C Virus related stakeholder policy-making is generally low and has implications for policymakers and decisions regarding the

**Table 2.** Description of studies Policy or regulation health promotion with Community Coalition Action.

| Study  | Sample  | Methods, Instrument, Analysis  | Outcome  |
|--|---|--|--|
| <i>Power-attitude-interest of stakeholders in developing adolescent health promotion media.</i> Muthmainnah et al. <sup>7</sup>  | 22 people from various stakeholders involved in the development of youth health promotion media. Government stakeholders (health, education, religion, social, national narcotics agency), NGOs, media, parent representatives, and stakeholder providers (teachers from 10 high schools in five Surabaya districts) were all involved. | Qualitative descriptive Interview and FGD A Thematic analysis  | Not all stakeholders have strong power, a positive attitude, and an active interest in developing youth health promotion media. Only two stakeholders (health sector and NGOs) are categorized as “saviors” because they have health programs. Many parties must be involved, but in reality there is still overlap, and some even say that the media for youth health promotion is not important. Stakeholder providers tend to have weak power and passive interests because youth health promotion media are usually given directly from decision-making stakeholders.  |
| <i>Co-regulation and alcohol industry political strategy: A case study of the Public Health England-Drinkaware Drink Free Days Campaign.</i> Hawkins et al. <sup>6</sup>                               | 53 stakeholder respondents (purposive sampling), 31 interviews were recorded, while the others refused to be interviewed/refused to be recorded.  | Mix methods are a combination of documentary analysis (including websites and social media accounts) and semi-structured interviews. Search on the web and social media, semi-structured interviews. Document Analysis and Case Studies.     | The analysis presented shows that the Drink Free Days (DFD) campaign is not used explicitly by the industry for public relations purposes. However, it is useful for broader strategic purposes. This strengthens Drink Aware’s position as a key policy actor and promotes the industry’s preferred understanding of the dangers of alcohol and the solutions it promotes. Policy influences are often subtle, indirect and designed to embed the organization in the policy architecture. This suggests that government agencies should proceed with extreme caution in entering into such partnerships with industry-related bodies.  |
| <i>Involvement and Multi-Sectoral Collaboration: Applying Principles of Health Promotion during the Implementation of Local Policies and Measures—A Case Study.</i> Lillefjell and Maass <sup>11</sup> | A multi-sector project group comprised of city (health, culture, environment, school, and cultural planning) representatives, regional authorities (District Councils), and researchers.  | Qualitative- case studies Document analysis, in-depth interviews. Thematic Analysis  | Provide a brief overview of how the principles guide actions and activities throughout the process. Then, discuss how specific principles contribute to shaping the overall process and discuss potential barriers to, and benefits of, applying specific principles. Finally, findings are synthesized and begin to describe how the application of the five principles contributes to anchoring locally based measures in overarching principles for health promotion.   |
| <i>A comparative human rights analysis of laws and policies for adolescent contraception in Uganda and Kenya.</i> Pehudoff et al. <sup>18</sup>  | Relevant laws and policies applicable between 2010 and 2018 can be accessed via national government websites and legal databases.   | Comparative content analysis of laws and policy documents governing every aspect of adolescent contraception at the national level in Uganda and Kenya. Participatory observation, document analysis, in-depth interviews. Thematic Analysis | Of the 93 laws and policies screened, 26 documents were included (13 policies in Uganda, 13 policies in Kenya). Uganda’s policies include a median of 1 WHO recommendation for adolescent contraception per policy (range 0–4) which most often concerns contraceptive accessibility. The Uganda Policy has 6/9 WHO recommendations (14/24 sub-recommendations) and misses out entirely on WHO recommendations for availability, quality and accountability of adolescent contraceptives. On the other hand, most Kenyan policies consistently address several WHO recommendations (median 2 recommendations/policy, range 0–6), most often for contraceptive availability and accessibility for adolescents. Kenya’s policy includes 8/9 WHO recommendations (16/24 sub-recommendations) except for accountability. |

(Continued)

**Table 2.** (Continued)

| Study   | Sample  | Methods, Instrument, Analysis   | Outcome   |
|---|---|---|---|
| <i>A Qualitative Exploration of Stakeholder Involvement in Decision-Making for Alcohol Treatment and Prevention Services</i><br>Alderson et al. <sup>9</sup>                          | 11 alcohol commissioners, 10 alcohol service providers, and 6 general practitioners, plus three facilitated focus groups with 31 alcohol service users.   | Qualitative- Case studies In-depth interviews and FGD<br>Thematic Analysis                                  | Findings indicated that most participants were aware of, and could mention, the various stakeholder engagement methods they had employed; However, the extent and impact of stakeholder involvement in decision-making is not transparent.  |
| <i>An Assessment of Schools' Wellness Policies and Teachers' Perspectives and Confidence in Teaching Nutrition in Elementary Schools in Jeddah, Saudi Arabia.</i> Yahya <sup>13</sup> | 11 girls' primary schools and teachers' perspectives on nutrition education offered at three of these schools. Sixty-one teachers and eleven principals.  | Quantitative Instrument: Questionnaire Analysis: Fisher's exact test  | Most schools (N14.10) have a formal school health policy that ensures students have access to healthy eating and exercise in a healthy environment. Many teachers (55.2%) agreed that they had adequate resources to teach nutrition in schools, and (58.6%) of them agreed that they had received adequate training from qualified people on nutrition education. Most teachers (94.7%) are confident in teaching nutrition and physical activity to their students. Teachers aged between 30 and 50 years were more interested in teaching nutrition than teachers aged over 50 years ( $p < 0.05$ ).   |
| <i>Hepatitis C virus-related policy-making in Iran: A stakeholder and social network analysis.</i><br>Behzadifar et al. <sup>8</sup>  | 16 stakeholders (55.17%) related to HCV policies and programs in Iran are government agencies. Six stakeholders (20.68%) are NGOs. Three stakeholders (10.34%) are political and media groups, while two stakeholders (1.73%) are members of the private sector and international institutions. | Mix Method<br>Instruments: Document Analysis, in-depth interviews and questionnaires.<br>Analysis: Thematic | Various stakeholders were found to be involved with HCV-related policies in Iran. Their level of participation and support in policy-making varies. In particular, international agencies have a strong interest in HCV-related policy-making, while the media and members of the private sector are characterized by moderate interest, and government and non-governmental bodies have interests that vary widely, from low to high, depending on the organisms. In addition, the media and members of the private sector, non-governmental Finally, the media, members of the private sector, and international institutions are rated moderate in terms of influence, while non-governmental and government actors are rated low to medium and low to high, respectively. and international institutions are rated low in terms of position, while government actors are rated low to high. The media are rated medium in terms of strength, while international bodies and private sector members are rated low to moderate and low, respectively. Non-governmental actors are rated low, while government agencies are rated low to high. Finally, the media, members of the private sector, and international institutions are rated moderate in terms of influence, while non-governmental and government actors are rated low to medium and low to high, respectively. |

(Continued)

Table 2. (Continued)

| Study   | Sample   | Methods, Instrument, Analysis   | Outcome  |
|---|--|---|--|
| <i>Developing a policy game intervention to enhance collaboration in public health policymaking in three European countries.</i> Spitters et al. <sup>16</sup>                      | Network of public health policymakers in the Netherlands, Denmark and Romania. | Qualitative descriptive<br>Instruments: Interviews with policy officials, observations during role play<br>Analysis: Content analysis | In2Action was developed as a 1-day role-play game, with a primary focus on developing collaborative cross-sectoral implementation plans based on approved strategic local public health policies.  |
| <i>Fostering access to and use of contextualised knowledge to support health policy-making: Lessons from the Policy Information Platform in Nigeria.</i> Uneke et al. <sup>10</sup> | 195 respondents from those who play a role in health-related policy making.    | Cross sectional study<br>Instrument: Questionnaire sent by email<br>Analysis: Unexplained   | Priorities The policy areas identified by policymakers are disease control and prevention, population health issues, and health administration. The challenge identified by policymakers is the lack of adequate capacity to access policy-relevant evidence and convert that evidence into policy. Policymakers suggest using systematic reviews, policy summaries, and rapid response mechanisms and involving policymakers in research as a way to increase the uptake of evidence for policy. A total of 126 policy-relevant peer-reviewed scientific articles, 85 health policy documents, and 201 policy-relevant gray literature documents were selected for inclusion in the PIP (Policy Information Platform). Of the 195 people contacted by email to evaluate the PIP, 31 (15.9%) responded. Respondents noted that PIP facilitates access to information based on local evidence and context-sensitive data. Barriers identified include lack of knowledge of PIP and the limited capacity of end users to use the data collected on the platform. |
| <i>Public mental health and associated opportunities.</i> Campion et al. <sup>19</sup>  | Articles/journals and documents from the United Nations, WHO                   | Literature review<br>Instrument: Journal database<br>Analysis: Thematic   | PMH (Public Mental Health) interventions can be divided into prevention of mental disorders and promotion of mental well-being at primary, secondary, and tertiary levels. At each level, higher-risk groups require targeting to prevent the gap from widening.<br>Population needs assessments at national and local levels inform providers, planners and policy makers about levels of mental disorders and well-being, risk and protection factors, higher risk groups, coverage and outcomes of different PMH interventions, size and cost of PMH intervention gaps, and estimated economic impacts and benefits of increased coverage<br>This involves:<br>A. Assessment of the size, impact and cost of unmet PMH needs and the associated economic impacts and benefits of increasing coverage<br>B. Use of this information to inform mental health strategies and policy development to address unmet needs, planning, inter-agency coordination, and broader advocacy  |

(Continued)

**Table 2.** (Continued)

| Study   | Sample  | Methods, Instrument, Analysis   | Outcome  |
|---|---|---|--|
| <i>Investigation of the Online Game Addiction Level, Sociodemographic Characteristics and Social Anxiety as Risk Factors for Online Game Addiction in Middle School Students.</i> Karaca et al. <sup>21</sup>                         | 1174 students who played online computer games  | Descriptive cross-sectional study Instrument: Kuesioner <i>The Computer Game Addiction Scale for Children (CGASC)</i> and the <i>Social Anxiety Scale for Children (SASC)</i> Analysis: <i>Multiple regression analysis</i> | It was found that 5.7% of the sample group were addicted users, that 44% were problem users, and that older age, higher social anxiety (SA) level, having a working mother, and having parents who finished high school. or higher education level, and time spent in front of the computer are risk factors for OGA (Online Game Addiction).  |
| <i>Loneliness, regulatory focus, inter-personal competence, and online game addiction: A moderated mediation model.</i> Lee et al., <sup>22</sup>   | 251 young age group playing online games  | Quantitative, online survey Instrument: Online Questionnaire Analysis: Hayes 4 and 14 PROCESS Macro Models (Hayes, 2013).   | Regulatory focus mediates the effects of loneliness on online game addiction. A moderated mediation analysis using PROCESS confirmed that interpersonal competence significantly protects the indirect effect of loneliness (via regulatory focus) on online game addiction. The findings show that interpersonal competence accounts for significant differences in the mediation model.  |
| <i>Policy, prevention, and regulation for Internet Gaming Disorder Commentary on: Policy responses to problematic video game use: A systematic review of current measures and future possibilities</i> (Király et al. <sup>23</sup> ) | 12 selected papers  | Literature Review Analysis: Content analysis uses a number of points proposed by Király et al. <sup>23</sup> to address policy and regulatory context issues  | The policy and regulatory context in which gaming takes place plays an important role in increasing the potential for problems to develop as a result of excessive gaming. The authors classify the available approaches as follows: approaches that (a) limit game availability; (b) reduce risk and harm, and (c) provide support for gamers. Overall, Kiraly et al. <sup>23</sup> argue that based on the evidence gathered, the current policy and regulatory approach is not effective enough and is not adequately assessed; therefore, they call for a more integrative approach to improving current policies. This comment makes use of a number of points made by Király et al. <sup>23</sup> to address the issue of policy and regulatory contexts by addressing (a) the socio-cultural environment and (b) gamers and gaming environments to (c) create reasons for prevention in order to reduce risks and harm and provide support for gamers and their families. |
| <i>What Makes a Key Player in Interorganizational Social Policy Networks? The Case of Uruguay.</i> Biosca and Galaso <sup>12</sup>  | The data set used for this study was commissioned by MIDES (Ministry of Social Development of Uruguay), 18 high-priority neighborhoods evaluated were selected by MIDES according to specific poverty and deprivation criteria. | Quantitative analysis with social network datasets were collected to evaluate the effectiveness of national public programs in Uruguay. Analysis: Descriptive statistics  | Significantly, the leader of the organization (SOCAT) has a central position in the network. The coefficient for degrees (0.549) is significant at 1% and is the highest magnitude. This is in line with Hypothesis I, because not only are these organizations expected to have higher interaction as direct policy implementers, but also because these organizations are encouraged to report all actors in their network, given that fostering collaboration is their primary goal.  |

(Continued)

Table 2. (Continued)

| Study  | Sample  | Methods, Instrument, Analysis   | Outcome   |
|--|---|---|---|
| <i>Multiplex competition, collaboration, and funding networks among health and social organizations: Toward organization-based HIV interventions for young men who have sex with men</i> Fujimoto et al. <sup>24</sup> | 58 organizations in Chicago and 20 organizations in Houston (informant-based sampling method based on perceived importance and/or frequency of YMSM attendance (young men who have sex with men) from a framework of 161 organizations in Chicago and 168 organizations in Houston. | Mix Methods Instrument: Semi-structured interview<br>Analysis: XPNet software   | Strong statistical evidence suggests that organizations of the same type, similar patterns of social media use, comparable funding patterns, and similar network contexts tend to compete with each other. These competitions are less likely to be accompanied by any collaboration if the organizations share the same funding sources.   |
| <i>The strategic prevention framework in community-based coalitions: Internal processes and associated changes in policies affecting adolescent substance abuse.</i> Peterson et al. <sup>17</sup>                     | 2014 survey data, secondary data on coalition efforts to make policy changes in the community during 2015–2016.   | Secondary data analysis<br>Analysis: SEM  | This study describes the implementation of the SPF (Strategic Prevention Framework) by a community-based coalition in New Jersey and presents the results of a study of their internal processes and associated changes in institutional and community policies and practices that affect adolescent substance abuse.   |
| <i>Examining the role of a community coalition in facilitating policy and environmental changes to promote physical activity: the case of Get Fit Kaua'i.</i> Choy et al. <sup>4</sup>                                 | 25 stakeholders, interview participants were asked to recommend other potential participants  | Instrument: Qualitative, Semi-structured interview and grounded theory analysis: case study.<br>CCAT Theory is used as a framework for developing interview questions.  | The models that emerged from the coalition interviews included coalition formation; capacity building, policy development; policy approval; and policy implementation.  |
| <i>Coalition-committees as network interventions: Baseline network composition in context of childhood obesity prevention interventions.</i> Moore et al. <sup>25</sup>  | 195 respondent  | Quantitative Instrument: Questionnaire Analysis: R. Multiple correspondence analysis requires packages FactoMineR and Factoextra.   | The results show that CCN is patterned in its structure and characteristics, and the study discusses whether adjustment to childhood obesity prevention interventions according to basic structure and characteristics could be beneficial for intervention implementation.   |
| <i>Policy responses to problematic video game use: A systematic review of current measures and future possibilities.</i> Kiraly et al. <sup>23</sup>   | Articles from databases: Web of Knowledge, Science Direct, PubMed, and Google Scholar, 12 selected articles   | Systematic Review   | Policies are classified into three main groups: (i) policy actions that limit the availability of video games (e.g. shutdown policies, system fatigue, and parental controls), (ii) actions aimed at reducing risk and harm (e.g. warning messages), and (iii) actions taken to provide assistance services to game players. Beyond attempts to classify current and potential policy measures, the authors also attempt to evaluate their efficiency theoretically and (if data are available) empirically.                    |
| <i>Do multiple community-based interventions on health promotion tackle health inequalities?</i> Nickel and Von Dem Knesebeck <sup>20</sup>  | Articles from the Pubmed and PsycINFO databases were screened as relevant, after a systematic review process 23 articles were selected that met the inclusion criteria and were included in the synthesis.  | <b>Analysis:</b> PRISMA-Equity 2012 extension guidelines for systematic re-views with a focus on health equity. Included studies were assessed for risk of bias using the "Quality Assessment Tool for Quantitative Studies," developed by the Effective Public Health Practice Project (EPHPP) | More than half (56.5%) of the studies reported improvements in overall socially disadvantaged communities (ie reduced inequalities at the regional level) in at least one health behavior and/or health status outcome. Among the remaining studies, we found some beneficial effects in the most deprived subgroup of the population (8.2%) and studies with no difference between the intervention and control areas (34.8%). There is no evidence that every program reviewed resulted in an increase in health disparities. |



adoption of more profitable and effective strategies.<sup>8</sup> Literature Review by Kuss,<sup>14</sup> concluded about the importance of relevant government policies for the prevention of IGD (Internet gaming Disorder).

## Discussion

This systematic review digs deeper into the synergies of policies related to health promotion that already exist and are not yet specific, such as health promotion prevention of online game addiction and existing policies related to youth. We also observe the process of making a public health policy that involves many stakeholders, the importance of the stakeholder provider (main) in planning to implementation and evaluation of a policy. Most studies report that coalitions/partnerships in a policy synergy are very important in the planning, implementation and evaluation processes of a policy. An interdisciplinary approach to the policy-making process to facilitate the development of integrated public health policies. This type of policy will be more effective,<sup>26,27</sup> especially if it is supported by the best available evidence (big data).<sup>28,29</sup> In addition, it is also necessary to absorb various sources of knowledge into policy, namely scientific evidence, stakeholder expertise and other knowledge.<sup>30,31</sup>

The challenge identified by policymakers is the lack of adequate capacity to access policy-relevant evidence and convert that evidence into policy. Policy makers suggest using systematic reviews, policy summaries and rapid response mechanisms and engaging policymakers in research as a way to increase the uptake of evidence for policy.<sup>10</sup> Policies related to adolescents that already exist in countries such as policies related to adolescent reproduction, policies in schools related to healthy canteens and physical activity, and policies related to health promotion to prevent online game addiction are still not widely discussed in journals. Kiraly recommends that policies related to online game addiction prevention be classified into three main groups: (i) policy actions that limit the availability of video games (e.g. shutdown policies, fatigue systems, and parental controls), (ii) actions aimed at reducing risks and hazards (e.g. warning messages), and (iii) measures taken to provide assistance services to gamers.<sup>32</sup>

Karaca's research, 2020 found that working parents can be a risk factor for children being addicted to online games, so in health promotion to prevent online game addiction in adolescents and children it is necessary to involve parents in monitoring efforts when children are at home and involve schools when children are at school. However, for the existence of a specific policy, there is no specific big data related to online game addiction and it also concerns the priority of government program policies, usually on economic improvement, so sometimes (for funding) health promotion media is not considered important.<sup>7</sup> In a systematic review regarding online game addiction and adolescent mental health, it was found that there is a relationship between mental health and online game

addiction in adolescents.<sup>33</sup> So that it is very important to make health promotion policies to prevent online game addiction, it is very important to have integration with mental health policies for adolescents.

## Conclusion

As a conclusion, this study looks at partnerships from a synergy perspective that can help leaders and managers of partnerships appreciate and optimize the role of community stakeholders. Synergy is the key to successful collaborative processes. Coalitions/partnerships create synergies by combining complementary knowledge, skills and resources from different people and organizations. Synergy can be defined as a breakthrough in thought and action that is produced when the collaborative process successfully combines the complementary knowledge, skills and resources of a group of participants.<sup>3</sup>

The limitation of this research is that there are still limited articles discussing policies specifically related to health promotion policies for preventing online game addiction in adolescents, so the authors also include articles related to health promotion policies in addition to prevention of online game addiction in adolescents.

## Author contributions

Eni Purwaningsih: The first author of this manuscript, and has been involved in the process of data collection, analysis and manuscript writing. Ira Nurmala: Data collection, analysis and manuscript writing. Mohammad Zainal Fatah: Data collection, analysis and manuscript writing.

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## Supplemental material

Supplemental material for this article is available online.

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