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A PROPOSAL OF 4 CRITERIA FOR FUTURE COLLABORATIVE RESEARCH BETWEEN KAZAKHSTAN AND JAPAN: SUGGESTIONS FOCUSING ON SEMEY, KOCHI, HIROSHIMA AND SHIMANE

Ken Inoue[1], Nailya Zh. Chaizhunussova[2], Yoshihiro Noso[3], Nobuo Takeichi[4], Sadayuki Hashioka[5], Haruo Takeshita[5], Yasuyuki Fujita[5], Madina M. Apbassova[2], Dariya M. Shabdarbayeva[2], Gulnar A. Berekenova[2], Masaharu Hoshi[6], Shotai Kobayashi[5], Yersin T. Zhunussov[2]

[1] Kochi University, Kochi, Japan;
[2] «Semey Medical University» NJSC, Semey city, Republic of Kazakhstan;
[3] Hiroshima International University, Hiroshima, Japan;
[4] Takeichi Clinic, Hiroshima, Japan;
[5] Shimane University, Shimane, Japan;
[6] Hiroshima University, Hiroshima, Japan.

Abstract

Collaborative research is based on 4 criteria that will be conducted in the future between Semey Medical University and Kochi University, Hiroshima University, Hiroshima International University and Shimane University to assess the social contribution of these studies.

The proposed material describes the social contribution made by the authors, both locally and internationally. Four criteria suggest what kind of contribution can be made. Based on these criteria, this material touches on the discussion of future collaborative research, that is, joint research between the "Republic of Kazakhstan and Japan", between the city of Semey and Kochi, Hiroshima, Shimane, 'also between' SMU and Kochi University, Hiroshima University, Hiroshima International University, Shimane University'. The four criteria are “1. Collaboration between public health and clinical medicine: testing suicide prevention measures, stress studies, epidemiological and biological studies among primary and secondary school students, and studies based on population diagnostics”, “2. Research from the perspective of clinical medicine: psychiatry, surgery and therapy”, “3. Basic medical research. Collaboration between basic medicine and clinical medicine: Genetic research; research in basic medicine and clinical medicine focused on microglia; subnuclear physics and the influence of radiation (including aspects from the point of view of physics)”, and “4. Social Contribution: Local and International Contribution.” Adhering to this, the level of research work of each university in particular will advance, and at the same time, the level of skills in conducting joint research.

Keywords: *new research, criteria, social contribution, Kazakhstan, Japan.*

Резюме

4 КРИТЕРИЯ, ПРЕДЛАГАЕМЫЕ ДЛЯ БУДУЩЕЙ КОЛЛАБОРАЦИИ В ОБЛАСТИ ИССЛЕДОВАНИЙ МЕЖДУ КАЗАХСТАНОМ И ЯПОНИЕЙ: ПРЕДЛОЖЕНИЯ, СФОКУСИРОВАННЫЕ НА СЕМЕЙ, КОЧИ, ХИРОСИМА И ШИМАНЕ

Кен Иноуэ[1], Наиля Ж. Чайжунусова [2], Йошихиро Носо[3], Нобуо Такейчи[4], Садаюки Хашиока[5], Харуо Такешита[5], Ясуюки Фудзита[5], Мадина М. Апбасова[2], Дарья М. Шабдарбаева[2], Гульнар А. Берекенова[2], Масахару Хоши[6], Шотай Кабаяши[5], Ерсин Т. Жунусов[2]

[1] Университет Кочи, г. Кочи, Япония;
[2] НАО «Медицинский университет Семей», г. Семей, Республика Казахстан;
[3] Хиросимский Интернациональный Университет, г. Хиросима, Япония;
[4] Клиника Такеичи, г. Хиросима, Япония;
[5] Университет Симане, г. Шимане, Япония;
[6] Университет Хиросимы, г. Хиросима, Япония.

Коллаборативные исследование основаны на 4 критериях, которые будут проведены в будущем между Semey Medical University и Kochi University, Hiroshima University, Hiroshima International University, а также Shimane University, для оценки социального вклада этих исследований.

Предложенный материал описывает социальный вклад внесенный авторами, как в локальном, так и в международном масштабе. Четыре критерия предполагают, какой же вклад может быть внесен.

Основываясь на этих критериях, данный материал затрагивает в обсуждении будущие коллаборативные исследования, то есть совместные исследования, между “Республикой Казахстан и Японией”, между городом Семей и Кочи, Хиросима, Шимане’, также между ‘SMU и Kochi University, Hiroshima University, Hiroshima International University, Shimane University’.

Четырьмя критериями стали “1. Коллаборация между сферой общественного здоровья и клинической медициной: тестирование мер по предотвращению суицида, исследования касающиеся стресса, эпидемиологические и биологические исследования среди учащихся младшей и средней ступени школы, и исследования, базирующиеся на диагностике населения”, “2. Исследования с перспективы клинической медицины: психиатрия, хирургия и терапия”, “3. Базисное медицинское исследование. Коллаборация между базовой медициной и клинической медициной: Генетические исследования; исследования в базовой медицине и клинической медицине, сфокусированные на микроглии; субъядерная физика и влияние радиации (включая аспекты с точки зрения физики)”, и “4. Социальный вклад: локальный и международный вклад”.

Придерживаясь этого, продвинется уровень исследовательских работ каждого университета в частности, а вместе с тем, и уровень умений ведения совместных исследований.

Ключевые слова: *новые исследования, критерии, социальный вклад, Казахстан, Япония.*

Түйіндеме

ҚАЗАҚСТАН МЕН ЖАПОНИЯ ЕЛДЕРІ АРАСЫНДАҒЫ ЗЕРТТЕУЛЕРДІ 4 КРИТЕРИЙ БОЙЫНША БОЛАШАҚ КОЛЛАБОРАЦИЯСЫ ҰСЫНЫЛАДЫ: ТОҒЫСТЫРЫЛҒАН СЕМЕЙ, КОЧИ, ХИРОСИМА ЖӘНЕ ШИМАНЕ

Кен Иноуэ[1], Наиля Ж. Чайжунусова[2], Йошихиро Носо[3], Нобуо Такейчи[4], Садаюки Хашиока[5], Харуо Такешита[5], Ясуюки Фудзита[5], Мадина М. Апбасова[2], Дарья М. Шабдарбаева[2], Гульнар А. Берекенова[2], Масахару Хоши[6], Шотай Кабаяши[5], Журсун Т. Жунусов[2]

[1] Кочи университеті, Кочи қ., Жапония;
[2] КеАҚ «Семей медициналық университеті», Семей қ., Қазақстан Республикасы;
[3] Хиросима Халықаралық университеті, Хиросима қ., Япония;
[4] Такеичи клиникасы, Хиросима қ., Япония;
[5] Симане университеті, Шимане қ., Япония;
[6] Хиросима университеті, Хиросима қ., Япония.

Болашақта Семей медицина университеті, Кочи университеті, Хиросима университеті, Хиросима халықаралық университеті және симане университеті араларында өтетін зерттеулердің әлеуметтік қорына баға беру үшін коллаборативті зерттеулер 4 кретерилерге негізделген.

Ұсынылған материал авторлармен енгізілген әлеуметтік қорды, соымен қатар халықаралық көлемде сипаттайды.

Төрт кретерии қандай қор енгізілетінін болжайды. Осы кретерилерге негізделе отырып Қазақстан Республикасы және Жапония елімен оның ішінде Семей және Кочи, Хиросима қалалары арасында берілген материал болашақ зерттеулерді талқылайды№ Төрт кретериге: 1. Қоғам денсаулығы мен клиникалық медицина арасындағы коллабрация, суицидті алдын алу үшін тестілеу, суицидке қатысты зерттеулер, мектептің төменгі және орта буын арасындағы оқушыларға эпидемиологиялық және биологиялық зерттеулер, тұрғындардың диагностикаға негізделген зерттеулер. 2. Клиникалық медицинаның перспективалық зерттеулері. Психиатрия, хирургия, терапия. 3. Негізгі медициналық зерттеу. Клиникалық медицина арасындағы колабрация. Генетикалық зерттеу. Негізгі медицина және клиникалық медицина зерттеулері, ядролық физика, радиация ықпалы, (физикалық көзқарас аспектілері). 4. Әлеуметтік қор, локалды және халықаралық қор.

Жоғарыда айтылғандарды ұстана отырып әрбір университеттің зерттеу жұмыстары сонымен қатар бірлескен зерттеулерді жүргізуді білу керек деңгейлері артады.

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Ken Inoue, Chaizhunussova N.Zh., Yoshihiro Noso, Nobuo Takeichi, Sadayuki Hashioka, Haruo Takeshita, Yasuyuki Fujita, Apbassova M.M., Shabdarbayeva D.M., Berekenova G.A., Masaharu Hoshi, Shotai Kobayashi, Zhunussov Ye.T. A proposal of 4 criteria for future collaborative research between Kazakhstan and Japan: Suggestions focusing on Semey, Kochi, Hiroshima and Shimane // *Nauka i Zdravookhranenie* [Science & Healthcare]. 2019, (Vol.21) 4, pp. 106-112.

Кен Иноуэ, Чайжунусова Н.Ж., Йошихиро Носо, Нобуо Такейчи, Садаюки Хашиока, Харуо Такешита, Ясуюки Фудзита, Апбасова М.М., Шабдарбаева Д.М., Берекенова Г.А., Масахару Хоши, Шотай Кабаяши, Жунусов Е.Т. Қазақстан мен Жапония елдері арасындағы зерттеулерді 4 критерий бойынша болашақ коллаборациясы ұсынылады: тоғыстырылған Семей, Кочи, Хиросима және Шимане // Ғылым және Денсаулық сақтау. 2019. 4 (Т.21). Б. 106-112.

Introduction

Semey State Medical University (denoted here as Semey Medical University: SMU) concluded an agreement with several Japanese universities (Kochi University, Hiroshima University, and Shimane University) [1]. Independent studies at SMU several years prior were related to radiation [1-2]. Over a 3-year-period, studies examined aspects of radiation [5,6] and they examined radiation from the perspective of clinical medicine [7-9] and basic medicine and public health [5,11]. SMU needs to endeavor to conduct regional studies of the Republic of Kazakhstan (like Semey), studies of Kazakhstan as a whole, and global studies on its own or jointly with other institutions. SMU also needs to conduct further studies in basic medicine and clinical medicine on its own or jointly with other institutions.

The Japanese authors of this work previously reported on collaboration with SMU [1,3,6,12-9]. Research into areas in which the Japanese authors of this work specialize could be conducted jointly with SMU. That could contribute to academic advancement in Semey and other parts of the Republic of Kazakhstan. In addition, staff of SMU could lecture at and conduct joint research with Japanese universities. This could further enhance joint research conducted between Japanese universities and SMU.

Research in which the Japanese authors of this work specialize is described here, along with its local and international contributions. This work also examines future collaborative research between Semey and Japan and future collaborative research between SMU and Kochi University, Hiroshima University, Hiroshima International University, and Shimane University.

Methods

This was a descriptive study.

Method of selection of study participants

This work systematically summarized research that the Japanese authors of this work are conducting or have conducted. Local and international contributions made by the authors are also summarized. This work describes new forms of collaboration between 'the Republic of Kazakhstan and Japan', between 'Semey and Kochi, Hiroshima, and Shimane', and between 'SMU and Kochi University, Hiroshima University, Hiroshima International University, and Shimane University'. This work also describes further collaborative social contributions.

Data collection

Research that is or has been conducted by the Japanese authors of this work has been identified, and reports of social efforts have been collected.

Data presentation

1. The Introduction describes previous studies that have been conducted mainly with SMU.

2. Research that is being or has been conducted by the Japanese authors of this work and social efforts have been described in terms of 4 criteria: "1. Collaboration between public health and clinical medicine", "2. Studies from the perspective of clinical medicine", "3. Basic medical research. Collaboration between basic medicine and clinical medicine", and "4. Social contributions: Local and international contributions".

3. Based on the implications of (1) and (2), new forms of collaborative research between 'Semey and Japan' and between 'SMU and Kochi University, Hiroshima University, Hiroshima International University, and Shimane University' have been examined. Various contributions related to that research have also been examined.

Data analysis

A descriptive study was conducted with a focus on (1) and (2) described in 4. Data presentation in the Methods. (1) and (2) were analyzed in detail, and (3) was performed.

Ethical considerations

There is no personal information in this study or paper.

Results

1. Collaboration between public health and clinical medicine

1-1 Examining suicide prevention measures

Research on suicide in Japan by the current authors provided insights from several perspectives.

Specific suicide prevention measures have been proposed based on a study of motives for suicide in light of suicide statistics for Japan as a whole [16]. Proposed suicide prevention measures have been examined in several Japanese prefectures [17,18].

Factors related to suicide have been examined economically, socially, and biologically [19-24].

1-2 Stress-related research

A collaborative study examined psychological measures and salivary cortisol and amylase in order to promptly detect and prevent anxiety and stress in medical personnel [25]. A study on leave from work for mental reasons suggested the need to further enhance return to work programs [26].

1-3 Epidemiological and biological studies of elementary and middle school students

An epidemiological study of elementary and middle school students reported their mood upon waking and electronic device use [18]. Another study suggested that lifestyle and serum cortisol were related [20]. Yet another study offered a view of "gaming disorder", which has become an international issue [21].

1-4 Studies based on screening and studies of local residents

A study conducted eye screening over a set period in an area of a prefecture, and it detected glaucoma early on [3]. The burden of caring for the elderly is a social issue in Japan. A study suggested that family caregivers need a respite [22].

2. Studies from the perspective of clinical medicine

2-1 Psychiatry

One study of panic disorder discussed the condition in light of whether or not agoraphobia was also present [23], another examined the relationship between the age of onset of panic attacks and the number of symptoms and a family history of a psychiatric disorder among first-degree relatives [24], and yet another examined potential characteristics of being at risk of suicide [25].

A study compared the characteristics of salivary amylase in relation to schizophrenia and control [26].

2-2 Surgery

Several studies in clinical medicine have reported on cancer due to the effects of radiation and surgical options [27,28].

2-3 Internal medicine

A study reported on the importance of screening for early detection of cancer due to the effects of radiation (thyroid cancer in particular) [29]. A neurological study of conditions such as stroke has also been reported [30].

3. Basic medical research. Collaboration between basic medicine and clinical medicine

3-1 Genetic research

Numerous studies have reported on deoxyribonuclease (DNase) [31,32,42,33,44,45,34]. Several studies have reported on the relationship between levels of zinc and iron in the blood and single nucleotide polymorphisms (SNPs) [35,6].

3-2 Research in basic medicine and clinical medicine focusing on microglia

Studies in basic medicine and clinical medicine have examined microglia [7-40,36,38]. Although some studies emphasized basic medicine [47,50,51,53,10,11,12], others provided strong implications for clinical medicine [13,14,15,16,17].

3-3 Particle science and the effects of radiation (including aspects of physics)

A study at HIMAC microdosimetrically evaluated secondary particles in a phantom produced by carbon 290 MeV/nucleon ions [55]. A study also reported on contamination at the Fukushima Dai-ichi Nuclear Power Plant [6]. Yet another study yielded suggestions regarding radioactive cesium as a result of the Fukushima Dai-ichi Nuclear Power Plant accident [52,61].

4. Social contributions

4-1 Local contributions

The Japanese authors of this work have engaged in several efforts related to the Republic of Kazakhstan. Exchange students from Kochi University to the Republic of Kazakhstan and their faculty advisor (one of the authors of this work) visited the deputy mayor of Kochi City in Kochi City Hall to describe the purpose and background of the exchange [62,47]. Studies recommended concluding agreements on exchanges between Kochi University and Kazakh universities (academic exchanges and student exchanges) [57,39]. Efforts by the government, non-governmental organizations (NGOs), and private organizations and collaborative efforts in relevant areas by relevant agencies truly represent community-wide efforts. [50-56].

The Japanese authors of this work are also lecturing on the Republic of Kazakhstan.

4-2 International contributions

The Japanese authors of this work have visited the Kazakh embassy in Japan, the Japanese embassy in Kazakhstan, and the international program center in Astana. The authors have promoted agreements on exchanges and sought cooperation from Kazakh universities and agencies to conduct joint research [58-65].

Discussion

This work has described studies conducted by the authors and social efforts with an eye toward future collaboration with the Republic of Kazakhstan (mainly with Semey and SMU). SMU has endeavored to conduct further research in public health over the past few years. The current authors have previously studied “collaboration between public health and clinical medicine” from several perspectives. The most prominent characteristics of public health research conducted by the current authors are that it benefits society and that it discusses public health in in terms of social medicine and clinical medicine. SMU previously emphasized clinical medicine, though the current authors have approaches in multiple areas, i.e. psychiatry, surgery, and internal medicine. Various courses in basic medicine at SMU continue to conduct experiments as part of basic medical research. The current authors conduct basic medical research but focus on collaborative studies in basic medicine and clinical medicine. Social contributions made by the current authors are both local and international contributions.

Studies over the past few years have suggested the importance of collaborative research and social contributions [45-46].

Conclusion

The current work has suggested 4 criteria for future collaborative research between Semey and Kochi, Hiroshima, and Shimane, i.e. between SMU and Kochi University, Hiroshima University, Hiroshima International University, and Shimane University. In specific terms, these criteria are:

“1. Collaboration between public health and clinical medicine”,

"2. Studies from the perspective of clinical medicine: Psychiatry, surgery, and internal medicine",

"3. Basic medical research. Collaboration between basic medicine and clinical medicine: Genetic research, research in basic medicine and clinical medicine focusing on microglia, and particle science and the effects of radiation (including aspects of physics)", and

"4. Social contributions".

That research can be conducted at SMU or its affiliated hospitals, and novel studies will be conducted. SMU and Kochi University, Hiroshima University, Hiroshima International University, and Shimane University can conduct joint research, implement social efforts, and continue conducting studies in accordance with the 4 criteria.

Doing so should improve the level of research at each university and improve research capabilities through joint research.

That research could be extended within the framework of Semey, Kochi, Hiroshima, and Shimane, and that could lead to advances in research in the Republic of Kazakhstan and Japan.

Conflict of interest: None.

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Контактная информация:
Чайжунусова Найля Жакияновна - д.м.н. НАО «Медицинский университет Семей». г.Семей, Республика Казахстан.
Почтовый адрес: Республика Казахстан, 071400, Восточно-Казахстанская область, г. Семей, ул. Абая Кунанбаева 103;
E-mail: n.nailya@mail.ru
Телефон: 87771450100