

Introduction to *SDQ^{plus}*

SDQ^{plus} is a web-based application (<https://sdqplus.org/login>) to permit longitudinal mental health assessment and diagnosis of individual young people. The main features of *SDQ^{plus}* are:

- Introduction of a persistent individual identification (*PlusIID*) for the person who is the subject of multiple assessments.
- Employment of the established, paper-based *SDQ_{score}* (<https://sdqscore.org>) for longitudinal assessment around the *PlusIID*. Assessments for *SDQ^{plus}* are actually done and saved on the *SDQ_{score}* application itself¹.
- Introduction of a specific *SDQ^{plus}* application for self-entry of SDQ assessments on PCs, laptops, iPads, mobile phones or any device with an HTML5 compatible web browser. Interview URLs may be copied and sent via email for the person, parents and teachers to complete. This application is identified by the *PlusIID* of the person being assessed; there is also a wider range of reports available.
- Access to in-depth DAWBA psychiatric diagnostic instruments (<http://dawba.info/>) via the *PlusIID*. DAWBA assessments may be done longitudinally. The DAWBA is intended for use by appropriately qualified mental health professionals.
- Integration of the data from all assessments and diagnoses under a *PlusIID* into a single summary “visualisation”, ordered chronologically.
- A full range of computer APIs to allow organisational EHRs to control *SDQ^{plus}*, link EHR IDs to *PlusIIDs* and collect data from *SDQ^{plus}*.

Because of the large body of research based on the SDQ and the DAWBA, *SDQ^{plus}* does not alter the instruments used nor change the nature of their use. Those familiar with these instruments will not find their use to be different.

Who is *SDQ^{plus}* for?

SDQ^{plus} is significantly more complex than *SDQ_{score}*. *SDQ^{plus}* is intended for existing *SDQ_{score}* users; a good understanding of the administration application (<https://admin.sdqscore.org/Login>) is essential, since only existing *SDQ_{score}* users can be “upgraded” to login to *SDQ^{plus}*. Other functions such as payment, activity monitoring and account management are done via the *SDQ_{score}* administration application. Because *SDQ^{plus}* is intended to assess individuals over time and possibly to diagnose suspected conditions, it requires considerably more organisation and commitment than *SDQ_{score}* which is amenable to fairly casual use. Although *SDQ^{plus}*, when used exclusively with the paper-based *SDQ_{score}* application, is much like employing the SDQscore.system and is charged at the same rate, users must also understand how to generate, preserve and link the *PlusIID* with the identify of the person being assessed over time.

Our view is that *SDQ^{plus}* is a system that will give more benefits when fully “embedded” within the organisations using it. Full integration of the *PlusIID* into organisational “patient”² management

1 <https://sdqscore.org>; at this time it is not possible to transfer *SDQ_{score}* assessments into *SDQ^{plus}*.

2 It is difficult to find a term that covers adequately, yet neutrally, the range of persons coming into the range of *SDQ^{plus}*: patient, client, student, subject, case.

systems is highly beneficial, if not essential³. For education and care organisations, persons typically may be assessed over a decade or longer; this requires stable and secure management and budgeting. A longer and hopefully wider horizon of operation means that those who introduce *SDQ^{plus}* should plan for new users to be trained and even for their own succession. In short, *SDQ^{plus}*, unlike *SDQ_{score}*, is not a system amenable to casual introduction without reference to management; it should be introduced with full support from both management and caring staff both.

Although this sounds as though *SDQ^{plus}* is only suitable for large organisations, this is not the case. Small organisations, even single-handed practices, should benefit from the extended capabilities of *SDQ^{plus}*. It is just that issues such as integration, budgeting, training and succession are perhaps not as far removed from day-to-day consideration of those introducing and using *SDQ^{plus}* in smaller organisations as they may be in organisations with necessarily more formal divisions of responsibility and funding.

It must be agreed that at least some of the attraction of *SDQ_{score}* before 2017 was that it was free and required little or no involvement of management. The charges introduced in March 2017, although modest, have been uncomfortable for some users; much of the discomfort now comes from needing explicit management support. Although *SDQ^{plus}* can be used for much the same cost as *SDQ_{score}*, it should be expected that longitudinal assessment will encourage more frequent assessment, even if the population assessed is no larger. We sincerely hope, however, that *SDQ^{plus}* **will** encourage organisations to assess all persons coming into their care since while persons with behavioural problems generally are easily identified for assessment, there are at least as many “quietly suffering” who are not assessed soon enough. Only regular, full-population assessment can give assurance that caring organisations have made systematic endeavours in this respect. This necessarily involves more cost and therefore even greater organisational commitment.

Self-entry of assessments becomes possible and straightforward with *SDQ^{plus}*. Although these assessments are more expensive, they may save up to 90% of the effort of paper-based assessment⁴ and also provide more informative and elaborate reports. It also is hoped that self-entry will expand the breadth and volume of assessment. Finally, for organisations qualified to deploy the DAWBA psychiatric diagnostic instrument, there is an implication of both increased cost and management commitment. The upside of DAWBA is the ability to add full-spectrum ICD10 and DSM-5 psychiatric diagnosis for interaction with secondary care and funding.

3 We will introduce *MySDQ^{plus}* soon, which should make *SDQ^{plus}* more usable in standalone operation while ensuring conformance with data protection principles.

4 This figure comes from an unpublished Norwegian study.

Registration for SDQ^{plus}

SDQ^{plus} users must first be SDQ_{score} users within an existing SDQ_{score} account (see the SDQ_{score} registration documentation⁵). The SDQ_{score} administrator must explicitly give SDQ^{plus} status to existing UserIDs. It must be understood that SDQ^{plus} users can incur substantial fees (e.g., US\$40 for a DAWBA instrument) and should have authorisation to do so.

Below are the steps taken by an administrator who granting SDQ^{plus} status to a UserID. From the starfish menu, the “Users” button is clicked. In this particular account, there is just one UserID, **junkjunk**. Note that the field under the “SDQ+” label is blank.

UserID	Password	Created	Comments	SDQ+
junkjunk	blue3tangerine	2017-02-12 07:54:58.638883		

Return Update

1. The administrator clicks the “Update” button to be able to alter *junkjunk*’s details.
2. They click the “SDQplus User” field and agree to a possible fee for \$50; they type “YES” (all capitals) into the field.
3. They click the “Submit Updated Details” button. If they decide not to give this permission, they can press the Cancel button instead.

SDQScore Administration Edit User Details
System time: 2017-03-19 10:42:53.142877 UTC/GMT/Z

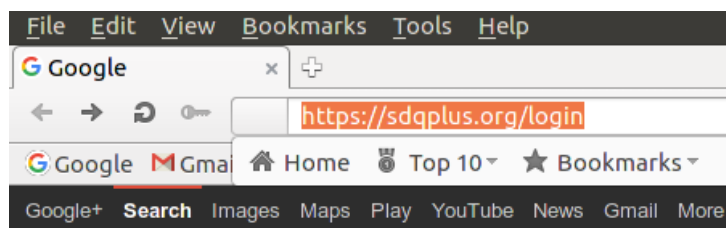
ID	jojop78blue@gmail.com	The SDQ Admin
User ID	junkjunk	Mandatory User
User Password	blue3tangerine	Mandatory passw
SDQplus User	<input type="checkbox"/>	SDQplus is a serv Type YES if you
Remove User	<input type="checkbox"/>	Type YES if you
Comments		Optional comme
Created	2017-02-12 07:54:58.638883	The User was cre

Submit Updated Details Cancel

Once updated with “YES”, UserID *junkjunk* has permission to log into SDQ^{plus}.

Logging into SDQ^{plus}

UserID *junkjunk* with the password *blue3tangerine* now has permission to login to SDQ^{plus}. Open the web browser⁶ and type <https://sdqplus.org/login> into the domain address bar:



This is the SDQ^{plus} login page:

⁵ <https://sdqscore.org/SDQScore.org.Administration.20170319.pdf>

⁶ Do not use old Internet Explorer (IE) web browsers! If you are still running Windows XP, it is possible that you may have a one of these. Get your IT team to install a modern web browser for you; Firefox, Chrome, Opera, Safari and recent Windows IE browser are all fine. The web browser used in this example is Opera but we normally use Firefox or Chrome in our development.

SDQ ^{plus}

Login

System time: 2017-05-28 17:13:23.957746 UTC/GMT/Z ... IP: 127.0.0.1

PlusIID	<input type="text"/>	Mandatory PlusIID
PlusIID password	<input type="password"/>	Please fill in this field. Mandatory password for this PlusIID
UserID	<input type="text"/>	Mandatory UserID password - you must create and authorise this at https://admin.sdqscore.org/Login
UserID password	<input type="password"/>	Mandatory password for this UserID; you must create this at https://admin.sdqscore.org/Login

Numerical PlusIID

From 1 June 2017 *SDQ^{plus}* is available. It features:

- a persistent, anonymous personal ID (PlusIID) for long-term assessment
- longitudinal *SDQ_{score}* paper-based assessments
- self-entered *SDQ* longitudinal assessments that can be emailed to respondents
- for appropriately qualified users, DAWBA full-panel, in-depth psychiatric diagnostic tool with ICD10/DSM-5 output
- extensive APIs for operation via organisational EHR systems.

SDQ^{plus} is intended for experienced *SDQ_{score}* users who are interested in assessment of individuals on a long term basis, probably within a formal organisational framework. Please contact us by email to discuss using *SDQ^{plus}*.

This is a good time to discuss some key technical details of *SDQ^{plus}*:

- **System time** – *SDQ_{score}* and *SDQ^{plus}* both use universal (UTC) or Greenwich (GMT) time because they are global systems, operating 24 hours a day. UTC/GMT do not have daylight savings time changes which cause problems with date-time stamps.
- **UserID and password** – these are created and maintained on the *SDQ_{score}* system.
- **PlusIID** - this is the persistent individual identification value that links the various, multiple assessments within *SDQ^{plus}*. Once created, it can only be accessed by UserIDs within the *SDQ* administration account under which the UserID was created.
- **PlusIID password** – this is an optional value that an authorised (i.e., logged in) UserID can assign to a *PlusIID* to prevent other UserIDs within an *SDQ* administration account from accessing the *PlusIID*.
- **Login** – this is the usual button clicked on this form. If a valid UserID and password is given for an existing *PlusIID* (and optional password), there is successful login to the *SDQ^{plus}* system. If details are incorrect or the UserID and *PlusIID* do not belong to the same administration account, login is not permitted and various security mechanisms are triggered.
- **Click to generate a new PlusIID; give valid UserID and Password** – this button is only clicked to create a new *PlusIID*.
- **Numerical Format** – this box is ticked to create a new *PlusIID* in numerical format instead of the default “petname” format (discussed later).

Creating a new *PlusIID*

When a person is first assessed by *SDQ^{plus}*, it is necessary first to create a *PlusIID* for them.

★ **It is the responsibility of the user or user’s organisation to maintain the link between the *PlusIID* and the identity of the person. Do not put personally identifying details on *SDQ^{plus}*.**⁷

⁷ Although *SDQ^{plus}* is highly secure against intrusion and unauthorised access, Youthinmind’s terms and conditions are that no personally identifying information should ever be placed on the system.

There is no way for *SDQ^{plus}* to maintain the link between the *PlusIID* and the person's identity. If the link is lost, it is not possible for us to re-establish it.


To create a new *PlusIID*, enter an eight characters minimum value into the *PlusIID* field; this value is not used, but acts as additional "safety" to prevent accidental generation of *PlusIIDs*. Leave the *PlusIID* password field blank. Enter a valid UserID and password pair. If numerical format for the PlusID is desired, tick the appropriate box. When ready, click the "**Click to generate ...**" button.

UserID	<input type="text" value="junkjunk"/>	Mandatory UserID password - you must create and authorise this at https://admin.sdqscore.org/Login
UserID password	<input type="text" value="blue3tangerine"/>	Mandatory password for this UserID; you must create this at https://admin.sdqscore.org/Login

Numerical PlusIID

Confirmation is required. Click the "OK" button if sure.

If login is successful, this page will appear:



PlusIID = dynamic.swan.7873
 UserID = junkjunk
 Balance = n/a

Your new PlusIID is *dynamic.swan.7873*

This PlusIID must be linked with your identity for the young person.

Do not lose this PlusIID, *dynamic.swan.7873*, or your link to it! We cannot recover this information for you!

A new *PlusIID* has been created. Make sure you copy it securely and associate it with your person's identity information. Login to *SDQ^{plus}* (<https://sdqplus.org/login>) to use it.

★ Do not forget to record the *PlusIID*! It is vital that the *PlusIID* is reliably associated with the person's identification. *SDQ^{plus}* has no way of saving this association! ★

PlusIID formats

The *PlusIID* has two formats:

1. **Numerical**, typically a 16 digit number such as 2897166.45762405603
2. "**Petname**", which is a synthesis of randomly chosen nouns, adverbs and numbers, such as *intensive.helium.57* or *famous.lemon.3565* - petnames are easy to communicate and transcribe.

Logging in

Use one of your *PlusIIDs* to login. Any UserID within your AdminID group can use a *PlusIID* generated by a UserID in that group (e.g., junkjunk in this case). You can, however, set a *PlusIID* password to keep the *PlusIID* confidential to the UserID setting the password. Even the administrator of your group cannot directly override the PlusIID password. Go to <https://admin.sdqscore.org/Login>, fill in the form and click the Login button:

Login

System time: 2017-05-28 17:25:17.986686 UTC/GMT/Z ... IP: 127.0.0.1

PlusIID	dynamic.swan.7873	Mandatory PlusIID
PlusIID password		Optional password for this PlusIID
UserID	junkjunk	Mandatory UserID password - you must create and authorise this at https://admin.sdqscore.org/Login
UserID password	blue3tangerine	Mandatory password for this UserID; you must create this at https://admin.sdqscore.org/Login

Numerical PlusIID

Login should take no more than a second on a typical internet connection. This screen should appear if your login is accepted⁸:

At the upper right are *PlusIID* and UserID. Your account balance is shown, it is negative in this case. Above the bird, the *PlusIID* is repeated. Logout will clear the Login screen and kill your session.

Click the “PlusIID details” button and you will see:

⁸ DAWBA, the full-panel psychiatric instrument is available only to qualified practitioners.

SDQ

plus

PlusIID = dynamic.swan.7873
 UserID = junkjunk
 Balance = -4.25

SDQ^{plus} Details Update

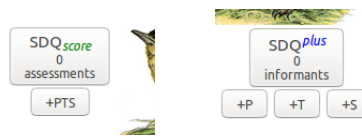
System time: 2017-05-28 18:07:06.662164 UTC/GMT/Z

PlusIID	dynamic.swan.7873	The PlusIID is generated automatically; may not be changed.
PlusIID password	<input type="password"/>	Optional password for the PlusIID; minimum 6 characters.
PlusIID created	2017-05-28 17:20:33	Date the PlusIID was created; may not be changed.

Only the “PlusIID password” field can be changed. If you want to set the password, as discussed above, put it in and click “Update Details”. Otherwise, just click “Return”.

Adding SDQ^{score} assessments

When starting to use SDQ^{plus} with a new PlusIID, it would be normal for the assessment buttons to have zero (0) assessments.



To start an SDQ^{score} assessment, just click the “+PTS” button left of bird’s beak and confirm that costs are acceptable. This form appears:

SDQ

plus

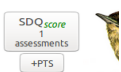
PlusIID = dynamic.swan.7873
 UserID = junkjunk
 Balance = -4.25

Add New SDQ

System time: 2017-05-28 18:11:46.941341 UTC/GMT/Z ... IP: 127.0.0.1

Comments about this assessment Avoid personally identifying information!

An indelible comment is added. Be very careful that it is not personally identifying. Even such an apparently bland comment as “Year 2, second semester” might not be acceptable in a small population. “If in doubt, leave it out!” Click the “Add new SDQ assessment” button. The bird menu is redisplayed but the SDQ^{score} count has now changed to one.



Click that button and a list of SDQs for this PlusIID is shown (only one in this case):

SDQ

plus

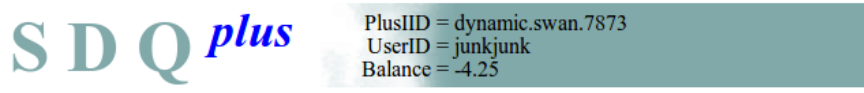
PlusIID = dynamic.swan.7873
 UserID = junkjunk
 Balance = -4.25

N#	Created (UTC/GMT/Z)	SDQ interview	Comments	Data	When	
1	2017-05-28 18:13	SDQ	Year 2, second semester	0		<input type="button" value="Export"/> <input type="button" value="JSON"/>

Click the “SDQ” button and the SDQ assessment is started⁹ in a new tab or window on <https://sdqscore.org>. When the assessment is complete, exit (close) the tab or window and return to

⁹ It is run on <https://sdqscore.org> and is identical to scoring done on that site without using SDQ^{plus}.

the page above. Click “Return” to go back to the bird menu. Another SDQ assessment would not normally be done again for some time although it is possible to create (and in the near future, visualise) multiple SDQs within the same timeframe. The next time the page is shown, note that two fields (“Data”, “When”) are updated:



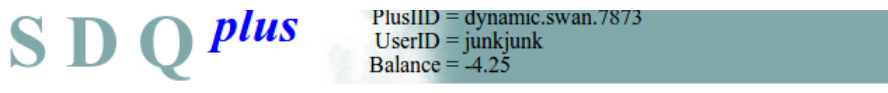
N#	Created (UTC/GMT/Z)	SDQ interview	Comments	Data	When		
1	2017-05-28 18:13	SDQ	Year 2, second semester	51	2017-05-28	Export	JSON

Return

“When” is the most typical update date because it is possible to return to the interview and complete parts of it later so that “Created” (the instant the + button was pressed) and “When” should rarely match. SDQs can be recalled, re-scored and altered by clicking their “SDQ” buttons but remember that posted *SDQ_{score}* fees will apply for re-scoring. Alterations should only be carried out under carefully considered circumstances and ensuring that there is a proper reason for doing so and that a paper trail is preserved. *SDQ^{plus}* does not maintain an audit trail of edits and there are no means to undo changes. Further discussion is outside the scope of this document. If, however, late-arriving teacher or parent questionnaires become available, then it is perfectly correct add those and re-score.

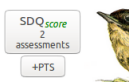
Adding a new *SDQ_{score}* assessment

Let’s say that almost a year has passed, it is a new school year and *dynamic.swan.7873* has another SDQ self and parent assessment. A teacher has now provided information retrospectively for the Year 2, second semester assessment of March 2017. This has been put in and re-scored. There is now more data but it is very difficult to forge the dates so that, even in this example, we cannot show this as being months ahead.

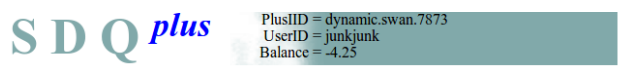


N#	Created (UTC/GMT/Z)	SDQ interview	Comments	Data	When		
1	2017-05-28 18:13	SDQ	Year 2, second semester	93	2017-05-28	Export	JSON

Return








There are new questionnaires so a new SDQ is added for Year 3, first semester, with new self and parent information. A second assessment is added and the “+PTS” button is clicked. The bigger “2 assessments” button is clicked and then the top row (N# 2) “SDQ” button. The two informants’ questionnaires are entered and an interim score is produced (teacher information is missing). The assessments then show as follows, remembering that we cannot forge the dates easily:



N#	Created (UTC/GMT/Z)	SDQ interview	Comments	Data	When		
2	2017-05-28 19:36	SDQ	Year 3, first semester (S+P)	93	2017-05-28	Export	JSON
1	2017-05-28 18:13	SDQ	Year 2, second semester	93	2017-05-28	Export	JSON

Return

Finally, the two assessments, almost a year apart, can be visualised. Note the eye  symbol in the “When (Who)” column on the left. The “s” to the right of  means “SDQ”. If  is clicked, the assessment on <https://sdqscore.org> is reopened to view the details.

When (Who)	pebdtot	sebdtot	tebdtot	pimpact	simpact	timpact	pemotion	semotion	temotion	pconduct	sconduct	tconduct	phyper	shyper	thyper	ppeer	speer	tpeer	pprosoc	sprosoc	tprosoc
2017-05-28 (sdq) 	30		19				6		4	10		4	10		8	4		3	0		4
2018-03-21 (sdq) 	25	9					5	4		6	0		9	2		5	3		1	10	

Our interpretation of this particular visualisation is that the child’s “pebdtot” may have improved (25 from 30) and so has “pconduct” (10 to 6); “pemotion”, “pconduct”, “ppeer” and “pprosoc” are not significantly changed. It may be significant, however, that there is quite a lot of dissonance between the child’s self-assessment and that of his parent and teacher. None of the respondents indicate there is any impact, which suggests whatever symptoms there are, are not interfering with the child’s well-being. The visualisation, of course, is not an answer, it is a stimulus for considered thought and discussion about the child’s psychological well-being.

Adding SDQ^{plus} assessments

SDQ^{plus} introduces self-entry SDQ assessments linked to the PlusIID. Unlike SDQ^{score} assessments in which there are inherently three informants (PTS, parent-teacher-self), SDQ^{plus} assessments are added one informant at a time. For this assessment, two parent and a teacher self-entered assessments are added (\$1.00 each) by clicking the “+P” button twice and the “+T” button once (the order does not matter).



When the “SDQ^{plus} 3 informants” button is clicked, this screen is shown:

SDQ^{plus} PlusIID = dynamic.swan.7873
 UserID = junkjunk
 Balance = -7.25

Created	P/T/S	Interview	Report	Data	When	
2017-05-29 17:44	P1	SDQ+	n/a	n/a	n/a	Link
2017-05-29 17:44	P1	SDQ+	n/a	n/a	n/a	Link
2017-05-29 17:44	T1	SDQ+	n/a	n/a	n/a	Link

[Return](#)

Again, forging dates is so difficult that the reader will have to imagine different dates. Emails will be sent to the two parents and the teacher. SDQ^{plus} does not allow you to record email addresses because this might compromise *dynamic.swan.7873*’s anonymity. SDQ^{plus} does make it easy to copy the link address with the “Link” button to the right of each interview.

SDQ^{plus} PlusIID = dynamic.swan.7873
 UserID = junkjunk
 Balance = -7.25

Created	P/T/S	Interview	Report	Data	When	
2017-05-29 17:44	P1	SDQ+	n/a	n/a		
2017-05-29 17:44	P1	SDQ+	n/a	n/a		
2017-05-29 17:44	T1	SDQ+	n/a	n/a		

[Return](#)

To copy this link to paste into email, first press Ctrl+C then click OK

<https://youthinmind.info/py/yiminfo/SDQplusStart.py?s=18915>

[Cancel](#) [OK](#)

This link (<https://youthinmind.info/py/yiminfo/SDQplusStart.py?s=18915&i=1xxxxxx4&n=1&r=P1&p=275xxxx896>) is pasted into an email and, when clicked by the recipient, starts an interview. The “SDQ+” button does the same, but emailing links should be the normal way of using this type of assessment. It may be useful,

however, where the extended reports are desired. It is, however, beyond the scope of this paper to demonstrate how to use the *SDQ^{plus}* assessment tool.

Once the links (interviews) have been completed, it is possible to see this (“Data” and “When”):

The screenshot shows the SDQplus interface. On the left is the SDQplus logo. On the right is a user information box with the following text: "PlusID = dynamic.swan.7873", "UserID = junkjunk", and "Balance = -7.25". Below this is a table with the following columns: Created, P/T/S, Interview, Report, Data, and When. The table contains three rows of data:

Created	P/T/S	Interview	Report	Data	When
2017-05-29 17:44	P1	SDQ+	Report	88	2017-09-19
2017-05-29 17:44	P1	SDQ+	Report	88	2017-10-15
2017-05-29 17:44	T1	SDQ+	Report	85	2017-11-01

The analyst can now review individual interviews or access their reports; unlike *SDQ_{score}*, there is no additional charge for this. Finally, all available assessments can be visualised:

When (Who)	pebdtot	sebdtot	tebdtot	pimpact	simpact	timpact	pemotion	semotion	temotion	pconduct	sconduct	tconduct	phyper	shyper	thyper	ppeer	speer	tpeer	pprosoc	sprosoc	tprosoc
2017-05-28 (sdq) @ S	30		19				6		4	10		4	10		8	4		3	0		4
2017-09-19 (pa1) @ +	28			0			5			8			10			5			1		
2017-10-15 (pa1) @ +	31			0			9			8			10			4			1		
2017-11-01 (tel) @ +			25			0			5			6			10			4			3
2018-03-21 (sdq) @ S	25	9					5	4		6	0		9	2		5	3		1	10	

Limitations

DAWBA (the full-panel psychiatric diagnostic instrument), although fully operational, is not in the scope of this document. Contact the author via sdq.scoring@gmail.com for further details.
